BEHAVIOURAL PROFILING OF PROBLEM GAMBLERS IN LAND-BASED GAMBLING VENUES

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In many countries, problem or pathological gambling has been recognized as a significant public health concern (Calado & Griffiths, 2016). Although generally less prevalent than other recognized addictive behaviours (e.g., alcoholism), problem gambling is known to affect at least 1-2% of the population at any given time with significant impacts on individuals, their families and communities (Calado, Alexandre & Griffiths, 2017; Calado & Griffiths, 2016). Despite this, it is known that only a small proportion of people potentially affected by gambling seek formal help. Usually this occurs when legal, financial and/or personal pressures leave people with little choice (Griffiths, 2004). Accordingly, there is interest in whether interventions might be more effectively targeted towards gamblers before they reach a point of crisis where many harmful consequences may already have been incurred.

As researchers in the gambling studies field have pointed out (Delfabbro et al., 2012a; Griffiths, 2009), one of the more challenging issues is to what extent the industry should take a proactive role in identifying and assisting people before any action is taken by gamblers themselves. Existing staff training provisions in land-based gambling typically encourage staff to assist people who show obvious signs of distress, who confess to having difficulties, or who are acting in a disruptive, abusive or violent manner (Oehler et al., 2017). Unless required by legislation, most training provisions do not require staff or venues in general to play any active role in trying to look for indicators or patterns of behaviour that might indicate that a particular person should be assisted.

Several reasons have often been advanced to explain why this might be the case. First, industry staff are typically not trained to diagnose problem gambling in-venue. Industry respondents will often argue that it is inappropriate for non-clinically or psychologically trained people to make a judgment about the status of gamblers (Allcock, 2002; Griffiths, 2010). A second problem is the threat of resentment and customer privacy. Unsolicited scrutiny of customer behaviour could be considered a violation of trust by some patrons and evoke an angry response (Hing et al., 2010), although there are international examples which suggest that this process can be facilitated by appropriate staff training. For instance, in the Canadian province of Saskatcheawan, gaming staff have conducted over 5000 interactions with patrons without complaint (Delfabbro et al., 2012b). This success may be due to the level of training received and the specialised nature of the staff in these Canadian venues. Similar findings have also been reported by Holland Casino who have engaged in such practices since 1996 (Goudriaan, de Bruin & Koeter, 2009). A third view is that it may not be in the industry's interest to identify and assist problem gamblers if a significant proportion of revenue is being derived from those patrons. Finally, it has been argued that venue staff may not have sufficient time to observe particular patrons in enough detail to make any sort of judgment about their disposition (Allcock, 2002; Delfabbro et al., 2012b).

Despite these practical obstacles, there are still likely to be contexts in which the process of behavioural profiling may be of value. This article briefly considers whether there are valid and reliable indicators or behavioural profiles that might be used to potentially identify problem gamblers in land-based gambling venues. More specifically, the aim of this article is to provide a summary of the range of indicators that have been identified and evaluated and the limitations of existing empirical research studies.

Identifying problem gamblers in physical venues: Sources of evidence and indicators

Although the behavioural characteristics of problem gamblers have been studied for several decades, it has only been the in last decade or so that there has been interest in studying the visibility or observability of gambling behaviour in land-based gambling venues (Delfabbro et al., 2012b). In this article, the focus is on examining the evidence from the small number of studies that have specifically focused on identification of problem gambling indicators.

The first major review in this area was commissioned by the Australian Gaming Council in 2002. This project involved a compilation of submissions from a variety of Australian and international experts working in research or clinical practice (Allcock, 2002). The principal focus of the review was on problem gambling behaviour in land-based gambling venues. Contributors were asked to comment on whether there were observable indicators that might reliably be used to differentiate problem gamblers from recreational gamblers in such venues. They were also asked to state their views on the practical utility of this knowledge and how knowledge concerning the validity of indicators could be enhanced by future research.

Most of the contributors identified indicators that they believed could be used, but most were pessimistic about how well staff could apply this knowledge given the various practical constraints associated with working in venue environments. Consistent with the points raised previously, these concerns related principally to the (i) visibility of behaviour in larger venues, (ii) consistency of observers, (iii) ability of staff to provide meaningful insights into pathological behaviour, and (iv) duration of observation periods (Delfabbro et al., 2012b). If staff changed shifts reasonably frequently, then concerns were raised about whether staff could observe individual patrons for a sufficient duration to develop a good knowledge of their behaviour.

A study by Schellinck and Schrans (2004) in Nova Scotia obtained data from a population sample of 927 video lottery gamblers, 16.5% of whom were problem gamblers on the Canadian Problem Gambling Index (Ferris & Wynne, 2001). The authors used a technique called association analysis. Often used in marketing and polling research, association analysis is a method whereby the researcher tries to determine the probability of a given event occurring (e.g., in this case a problem gambler being identified in a land-based gambling venue) based on a combination of cues being detected at a given point in time. To conduct this form of analysis, the authors derived a number of variables. First, they calculated the likelihood of problem and non-problem gamblers ever reporting a particular event. Second, they weighted the data by the percentage of occurrences on which gamblers reported having displayed the behaviour.

Based on their analyses, the authors found that the most common experiences or behaviours reported by problem gamblers in terms of frequency were (i) spending three-quarters of their time gambling, (ii) gambling for more than 180 minutes in one session, (iii) feeling angry, (iv) feeling sick/sad from gambling, and (iv) sweating. Feeling sick or sad, and gambling for over 180 minutes in one session were the factors that most strongly differentiated problem gamblers from other gamblers. For example, an individual was around three times more likely to be a problem gambler as compared with the base-rate in the sample if they reported feeling sick while gambling.

A study conducted by Hafeli and Schneider (2006) in Switzerland carried out qualitative interviews with a sample of 28 problem gamblers, 23 casino employees, and seven regular gamblers in an attempt to develop a range of indicators that might be used to identify problem gamblers within Swiss casinos. Material from these interviews was content analysed and classified into meaningful categories. Only statements that were simple and concise, and which referred to concrete examples of behaviour were included.

Problem gamblers were perceived as those who gambled more intensely and frequently, who were compelled to find many different ways to raise funds to gamble, and whose social and emotional responses differed from other gamblers. Problem gamblers were seen to be more socially withdrawn, angry,

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anxious, depressed, but also more immersed in the activity. Most of these items appeared to have good face validity as indicators of problem gambling, although some items such as "guest pleased by winning" and "guest seeks social contact" appeared more questionable because it is known that problem gamblers are often solitary and evasive in their social interactions and also report reduced enjoyment from gambling (Delfabbro et al., 2012b).

Although the authors did not present statistical analyses to show how these indicators could be used to differentiate between different types of gambler, these indicators have been applied in training programs for staff working in Swiss casinos, where there are already policies and procedures in place to identify patrons with gambling-related problems (Delfabbro et al., 2012b). Swiss gambling policies are governed by the Casinos Act of 1998 which, as one of its provisions, requires staff to log instances of problem gambling. If individuals display two or more of what are termed A-type criteria (e.g., they admit to having a problem, try to borrow or steal money, or receive third-party enquiries), an interview will be conducted with gamblers (Delfabbro et al., 2012b).

A similar Australian study was undertaken by Delfabbro et al. (2007) which also drew upon material from the previous studies outlined above. One difference was that attempts were made to develop indicators that were not so specifically focused on particular activities (e.g., casino table games), but which could be applied to venue-based gambling more broadly. In the initial stage of this research, a list of indicators was provided to both venue staff (n=120) and counsellors (n=20) recruited from several different parts of Australia. Both groups of respondents were asked to indicate whether each item in the checklist was a valid indicator of problem gambling. The results showed that almost all of the indicators were endorsed by both groups of respondents with venue staff, in particular, placing a very strong emphasis on social and emotional responses (e.g., player anger, blaming staff for losing). Venue staff also drew attention to the importance of looking for changes in player appearance and behaviour or "out of character" behaviours rather than solely focusing on static indicators.

The main component of the research was a detailed survey of almost 700 regular gamblers recruited either from the general community or from outside gaming venues. Participants were eligible to participate if they gambled at least fortnightly on gaming machines, casino games, and/or sports and race betting, although the principal focus was on gaming because this is largely venue-based. Analyses were based on the proportion of problem and non-problem gamblers who reported producing the particular behaviour rarely or more often. They found that indicators typically fell into one of two categories. There was one group of indicators that were relatively commonplace among problem gamblers, but which were also reported by a moderate proportion of other regular gamblers. A second group were more rarely reported, but typically only by problem gamblers. Each indicator was described in terms of its likelihood of being reported by a problem gambler versus other regular gamblers with higher ratios indicating a greater the likelihood of the indicator being reported by problem gamblers. Results showed that almost all behaviours or experiences were significantly more likely to be reported by problem gamblers, but that the divergence of responding varied across times. Some activities, such as using cash machines on several occasions, playing very fast, or try very hard to win on one machine were relatively common amongst problem gamblers but also reported by a modest proportion of other gamblers. By contrast, very strong emotional responses or attempts to disguise one's gambling were rarely reported by non-problem gamblers.

These indicators were used in a series of further analyses to determine the best predictors of gambler status (problem vs. non-problem). Several different final models were presented based upon combinations of different indicators. One model was based on the overall sample and another on males and females separately. The strongest predictors for males were related to impaired control (i.e., an inability to stop gambling) and emotional responses, whereas strong emotional responses

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and a preoccupation with gambling was most indicative for female problem gamblers.

More recently, Delfabbro and colleagues replicated their 2007 Australian study and published their findings in a standalone report (Thomas, Delfabbro & Armstrong, 2014) as well as well as publishing a paper comparing the 2007 study with the 2014 study (Delfabbro, Thomas & Armstrong, 2016) and study examining the gender differences between the participants in the 2014 study (Delfabbro, Thomas & Armstrong, 2018). In the 2016 paper (Delfabbro et al., 2016), data from 680 regular gamblers in the 2007 study (Delfabbro et al., 2007) were compared with data from 505 regular gamblers in the 2014 study (Thomas et al., 2014), both of which were designed to identify reliable and useful indicators for identifying problem gambling in venues.

As with previous studies, results showed that problem gamblers were much more likely to report potentially visible emotional reactions, unusual social behaviors, and very intense or frenetic gambling behavior. Delfabbro et al. (2016) reported that the best behavioral predictors of problem gambling based on the self-reports of gamblers were (i) betting $2.50+ per spin on gaming machines most times, (ii) leaving the venue to go and find more money, (iii) feeling sad or depressed after gambling, (iv) change in grooming/appearance (e.g., decline in personal hygiene), (v) gambling through usual lunch break, and (vi) putting money back into the gaming machines and keeping playing. However, very few of these can be reliably identified by venue staff. It was also reported that the accuracy of identifying problem gamblers in-venue was more accurate if based on an accumulation of a diverse range of indicators.

In relation to gender differences using the same data but reported in a later paper, Delfabbro et al. (2018) reported that female problem gamblers were more likely than males to have indicators reflecting emotional distress whereas male problem gamblers were more likely than females to display aggressive behavior towards gambling machines and other individuals in the venue. The behaviors that most clearly differentiated male problem gamblers from male non-problem gamblers were showing signs of emotional distress and attempting to conceal their presence in venues from other individuals. The behaviors that most clearly differentiated female problem gamblers from female non-problem gamblers were signs of anger, a decline in grooming, and those attempting to access credit. These findings suggest that identification policies and practices cannot necessarily be viewed as a 'one-size-fits-all' and that male problem gamblers may display different signs and symptoms in-venue compared to female problem gamblers.

Limitations of venue-related problem gambling indicator studies

Although existing studies found support for the notion that there are valid indicators available to identify problem gamblers in venues, there are a number of caveats that need to be applied to these findings. The first difficulty is that all of the studies described involved only single samples. For models to be usefully applied to support harm minimisation policies, it would be important to show that models developed in one sample can be replicated using another (Delfabbro et al., 2012b). Moreover, it should be possible for models to be applied and then validated against some independent and well-validated method for classifying problem gamblers.

A second difficulty is that survey-based responses do not provide a lot of information concerning the practical reality of observing and consolidating information in a venue environment. Even if the same staff members are available in the venue over a protracted period, it does not necessarily follow that they will have the ability to observe the same players all the time (Delfabbro et al., 2012b).

In Delfabbro et al.'s (2007) study, an attempt was made to position observers in venues for periods of up to four hours to determine how much behaviour could be reasonably observed in this period. In general, it was found that several indicators could be observed in this period, but that such a process was unlikely to be possible for venue staff members who generally only spent around 15% of their time in the areas where gaming machines were operating. Schellinck and Schrans' (2004) research similarly showed that, if the actual frequency with which people produce different indicators are considered, the

probability of observing two indicators together at a particular point in time is likely to be very low.

Another potential challenge for the identification process is that studies are based on aggregate results. Although problem gamblers are likely to share many similarities, it is also known that different subgroups of gamblers very likely exist. These views suggest that the significance of particular indicators may, therefore, differ depending upon the type of gambler. For example, in a number of these models or typologies, a distinction is often drawn between gamblers who are emotionally vulnerable and gamble to escape from feelings of anxiety or depression and those who gamble because of the excitement or 'action' (Delfabbro et al., 2012b). Those gamblers who are more emotionally vulnerable may be more likely to display emotion when they gamble and be detectable because of these characteristics, whereas there may be others whose behaviour is distinctive because of stronger externalised behaviours (e.g., displays of anger, large bet sizes, histrionics, etc.). At present, based on existing research evidence, it is difficult to determine whether visible indicators cluster according to these subtype models, but it will be important for this possibility to be considered in future research (Delfabbro et al., 2012b).

Most reliable indicators of problem gambling in land-based casinos

Based on previous empirical research (outlined above and which is admittedly limited), the following indicators appear to be the best behaviors that could be looked for by staff based in land-based gambling venues. The more of these behavioral indictors that are present over a longer-term period (e.g., one to two months) the greater the likelihood of that individual being a problem gambler. It should also be noted that some of these indicators relate to one type of gambling only (e.g., slot machine players):

- Gambles for over three hours in one session without taking a break
- Gambles continuously
- Gambles intensely without reacting to any external stimuli
- Rushes from one slot machine to another
- Spends more than €200 in one gambling session
- Increases gambling expenditure significantly over time
- Gets money out from an ATM more than twice during a single visit to the venue
- Continues gambling after a very large win
- Uses coin changing machine at least four times within a gambling session
- Plays two or more slot machines at once
- Looks sad and depressed after gambling session
- Cries after losing money
- Sits with head in hands after losing
- Complains to the staff about losing
- Swears at or is rude to staff
- Shows a decline in their grooming and appearance
- Avoids cashier and only uses cash facilities
- Gambles in an aggressive manner (e.g., swears at or kicks the slot machine)
- Is sweaty and nervous looking (e.g., biting lips)
- Leaves venue but comes back having got more money to gamble
- Asks venue staff for a loan or credit while in venue
- Attempts to borrow money from others to gamble while in venue
- Stays to carry on gambling when friends have left the venue
- Asks venue staff to not let people know they are there
- Gambles in an aggressive manner (e.g., swears at or kicks the slot machine)
- Gambler is sweaty and nervous looking (e.g., biting lips)
- Gambler leaves venue but comes back having got more money to gamble
- Gambler asks for a loan or credit in-venue
- Gambler attempts to borrow money to gamble in-venue
- Gambler stays to carry on gambling when friends have left the venue
- Gambler asks venue staff to not let people know they are there

Conclusions

In offline gambling venues, it appears possible for venue staff to be alerted to players with riskier gambling patterns (e.g., who have just gambled for three or more hours or spent very large amounts) and for this information to be used to by staff to enhance their capacity to identity players most likely to need assistance. As noted above, it is generally difficult for individual staff members to have the time and ability to watch most players, but the use of surveillance systems could be used to narrow down the field of potential gamblers at risk, then observation and identification of problem gamblers may become more effective. Such gamblers could be subtly approached with invitations to have a break or be given inducements (e.g., snacks and beverages) that take them away from the machine or table, or staff could observe those players more carefully over time.

In summary, effective identification may have the potential to provide an important way in which to integrate the principles of responsible gambling and harm minimisation. From a responsible gambling standpoint, effective identification procedures may enable to the industry to monitor the impact of its products on consumers, but this will only be useful if it leads to appropriate action.

Even in countries where legislation has been enacted, challenges still remain. Junior staff members who interact with gamblers may not have the authority to take action; referrals may need to made to other senior staff, and then a separate person again may have to interact with the player. A more effective model is one where skilled staff (with the ability to provide immediate counselling and assessment) are located on-site, or can be readily contacted in the event that a player with difficulties is identified. Some models of this nature are claimed

to be in operation already at some US casinos (Griffiths, 2010), but it is evident that thorough and transparent evaluations of these arrangements need to be conducted to ensure that they are making a genuine contribution to harm minimisation as opposed to corporate marketing in the guise of responsible gambling. :: CGi

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