



# Problem and Non-problem Gamblers' Attraction to Different VLT Games

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#### ABSTRACT:

This study investigated the reactions of Video Lottery Terminal (VLT) problem and non-problem gamblers to playing two different kinds of VLT games: winning-focused ones and entertainment-focused ones. Three two-hour focus group sessions were conducted separately with problem and non-problem gamblers. Differences between problem and non-problem gamblers were found with respect to four themes concerning winning-focused and entertainment-focused games: Preferred traditional games; Preferred winning indicators; Liked winning bigger prizes; and Involved both strategies and beliefs. A consideration of the themes revealed that for problem gamblers, winning-focused games resulted in greater excitement, faulty gambling beliefs, and dissociation than entertainment-focused ones. The findings suggest that the selection of new VLT games for the marketplace should not be based on preferences for problem gamblers; new VLT games should be "entertainment-focused" ones rather than "winning-focused" ones.





Playing electronic gaming machines, typically known in various countries as Video Lottery Terminals (VLTs), Slots, Fruit Machines, Poker Machines (Pokies), Fixed Odds Betting Terminals (e.g., Virtual Roulette) is a highly popular, world-wide gambling activity (Griffiths 1994). For example, in Canada, Azmier (2001) reported that there were approximately 40,000 VLTs. Furthermore, the Government of Nova Scotia, Canada (2007) reported that in 2006/07 approximately 54.3% of the government's net gambling revenues came from VLT gambling and 17.9% came from casinos.

In the province of New Brunswick, Canada, according to information provided by the *Atlantic Lottery Corporation* (Burns 2005), there are about 2650 VLTs. Furthermore, Atlantic Lottery Corporation introduces two new VLT games into the province, and adjoining provinces, every 12 months strictly in accord with marketplace considerations using focus groups. These groups consist of either regular, frequent VLT players, or casual, infrequent VLT players; however, focus group members are *not* assessed with respect to their problem gambling status. Burns (2005) tentatively classified the new VLT games as being either 'winning-focused' or 'entertainment-focused' ones.

#### Winning- and Entertainment- focused VLT Games

The former have relatively large, infrequent payouts, traditional graphics such as bells, sevens and fruit, and bonus rounds featuring free spins. An example of a winning-focused game would be Royal Spins, manufactured by *Spielo* (2007). This is a 25-cent, royalty-themed fruit and 7's spinning reel game, with 5 reels and 5 pay-lines, featuring free spins and a mystery bonus award (Spielo 2007). The payout percentage is 94.85% (Lotteries Commission of New Brunswick 2007). On the other hand, entertainment-focused games have relatively small, frequent payouts, superior graphics, sound and themes, and elaborate





bonus rounds involving challenges. An example of an entertainment-focused game would be Tailgate Party, manufactured by *International Game Technology* (GTA Slots 2007). This is a 5 reel, 9-line reel game that is "a celebration of great food, gridiron warriors, sassy cheerleaders, and bone-crunching action all backed by that favorite football song, 'Get Ready for This'.... As the team progresses down the field, the game multiplies the player's bet by the number of yards the team gains. If the team makes either a field goal or a touchdown, the game awards the player a bonus based on the number of bonus-initiating symbols multiplied by the number of coins bet!... When two Cheerleader symbols land on the same horizontal payline on both the first and fifth reel, the game awards the player a bonus equal to the number of coins bet multiplied by 3 to 10 credits!" (GTA Slots 2007). The payout percentage for Tailgate Party is 93.04% (Lotteries Commission of New Brunswick 2007), giving it a payout percentage of 1.81% less than Royal Spins.

Winning-focused games, in contrast to entertainment- focused games, were found by Nicki, Gallagher, and Cormier (2007) to be associated with higher verbal ratings of dissociation, feeling in control, excitement, and wanting to spend more time and money for problem gamblers than for non-problem gamblers. These findings are consistent with the many reports in the literature pertaining to the motivational importance to problem gamblers of dissociation (e.g., Diskin and Hodgins 1999; Gupta and Deverensky 1998; Jacobs 1988), faulty gambling beliefs such as the illusion of control (e.g., Griffiths 1994; Jefferson *et al.* 2004; Ladouceur and Walker 1996), and excitement (e.g., Anderson and Brown 1984; Coulombe *et al.* 1992; Griffiths 1991).





# **Qualitative Gambling Research**

Wilkinson (2003) reports that focus groups have become a widely used method in qualitative research across the social sciences. However, in the gambling research literature, we have only found one study using this methodology: Wood and Griffiths (2002) investigated adolescent perceptions of the National Lottery (U.K) and scratch-cards. Furthermore, only three studies in the gambling literature have employed a qualitative approach (not involving focus groups) to further understand VLT gambling behavior. Doiron and Mazer (2001) using the Grounded Theory approach outlined by Wilson and Hutchinson (1991) with seven VLT gamblers found that the overwhelming involvement that characterizes VLT addiction may be regarded as an important experience that fills a relational void in people's lives. Parke and Griffiths (2005), using the Interpretative Phenomenological Analysis of Ideographic Case Study approach (Smith 1996), found with two problem gamblers that aggressive behavior associated with playing non-random, software, slot machines in the U.K. was indirectly determined by frustration and more significantly by negative affect when losing.

# **Rationale and Purpose of Study**

As noted above, VLT gambling is a highly popular activity and very important source of revenue for the gambling industry. Unfortunately, the gambling industry has introduced new VLT games, which tentatively may be categorized as winning-focused and entertainment-focused ones, into the marketplace using a qualitative focus group methodology with groups of participants most likely consisting of both problem and non-problem VLT gamblers. As a consequence, the current marketing practice of the VLT gambling industry most likely results in the introduction of new VLT games using procedures that favour the selection of games preferred by problem gamblers. This indiscriminate selection of participants for focus groups





could result in an increase in the prevalence of problem gambling in the community. Thus, the purpose of this study was to provide a deeper understanding of the relationship (Charoenruk 2012) between the type of gambler and their opinions on VLT games using a similar qualitative methodology. Specifically, an in-depth examination of gamblers responses to VLT games was undertaken using focus groups similar to those commonly used by the gambling industry (Burns 2005). Furthermore, a quantitative methodology based on Problem Gambling Severity Index (PGSI; Wynne 2002) scores was used to ascribe participants into two different kinds of groups (problem versus non-problem gamblers) while a qualitative methodology (focus groups), as outlined by Krueger & Casey (2000), was used to explore the empirical world from the perspective of the gambler and not the researcher (Charoenruk 2012). This allowed us to be informed of the opinions and beliefs of separate groups of participants regarding their playing VLT games — an approach which had not been commonly used by the gambling industry (Burns 2005).

Specifically, we were interested in finding out if the subjective group experience of the participants in our study would suggest that dissociation, faulty gambling beliefs, and excitement were more important in the determination of attractiveness of winning-focused VLT games in comparison to entertainment- focused VLT ones, for problem gamblers than for non-problem gamblers. We expected that our examination of these questions would have implications for the Atlantic Lottery Corporation and other gambling agencies in Canada and elsewhere involved with the selection of new games into the global marketplace.

# **Participants**

We recruited 45 participants via an announcement in the local newspaper, posters in local drinking establishments, and from a participant pool of VLT gamblers from the Fredericton





(population=85,000) area in the province of New Brunswick, Canada. We contacted prospective participants by telephone, screened them using the PGSI, and if eligible, placed them into either one of two categories: problem gamblers (13 males, 7 females) with total scores of eight or above on the PGSI or non-problem gamblers (10 males, 15 females) with total scores between zero and two. All participants would have been exposed for at least sixmonths to winning-focused games like Royal Spins and entertainment-focused games like Tailgate Party in the Fredericton area.

#### Measures

Canadian Problem Gambling Index (CPGI; Wynne 2002)

Three sections of the Canadian Problem Gambling Index (CPGI; Wynne 2002) were used in this study: gambling involvement, problem gambling assessment, i.e., PGSI, and demographics. Problem gambling assessment was measured using nine, self-report scored items pertaining to gambling activity in the last 12 months. Total scores on the PGSI relate to three problem gambling categories: 1-2 represents "low risk"; 3-7 represents "moderate risk"; 8-27 represents "problem gambling". Wynne (2002) found the PGSI to be a reliable and valid instrument in measuring problem gambling. The Cronbach alpha reliability coefficient was reported to be .84; its test-retest reliability was found to be .78. Its concurrent validity was supported by its being highly correlated with the South Oaks Gambling Screen (SOGS; Lesieur and Blume 1987), and the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; APA 1994).





### Focus Group Questions

Six, relatively open-ended, focus group questions were specifically developed for this study. We attempted to develop questions that would elicit participants' opinions with reference to any VLT game preference, motivation to gamble, and gambling beliefs.

Informational Biases Scale (IBS; Jefferson et al. 2004; Jefferson and Nicki 2003)

This 25-item self-report questionnaire measures cognitive distortions such as the illusion of control and gambler's fallacy in VLT players. It is comprised of a set of scales ranging from 1 ("Don't agree at all") to 7 ("Strongly agree"). Cronbach's alpha coefficient was reported to be .92 for internal consistency. With respect to validity, it was reported to be significantly correlated with both the SOGS and the National Opinion Research Center DSM IV Screen (NODS; Gerstein *et al.* 1999).

#### **Procedure**

The study took place in a large meeting room in Keirstead Hall on the University of New Brunswick campus in Fredericton, New Brunswick, Canada. The same primary and secondary moderators were present at all eight sessions, which were videotaped.

Participants consisted of three groups of problem gamblers and three groups of non-problem gamblers; each group was made up of six to ten participants. The running order of groups was randomly determined, and group status was unknown to moderators.

At the beginning of the session, the moderators asked the participants to find a comfortable seat around a table in the center of the room, and to complete the informed consent and confidentiality agreement forms. After all the participants had settled into their



seats, moderators introduced participants to one another and initiated the focus group questions. The first series of three open-ended questions dealt with participants' preferences and reasons underlying their preferences for winning-focused games like Royal Spins and entertainment-focused games like Tailgate Party; this was followed by a short break. The second series of three open-ended questions dealt with strategies, cognitions, and beliefs associated with playing these kinds of games.

The primary moderator encouraged the participants to discuss the questions from the list one by one, and when necessary clarified and prompted their responses. There were no right or wrong answers. The time taken to complete the discussion of the six questions was roughly two hours. At the end of the group discussion, the secondary moderator who had taken notes during the discussion, presented a short summary of the discussion to the participants, and asked them if the summary was an accurate one. This was done in order to minimize any misinterpretations of participants' opinions and beliefs concerning focus group questions. Moderators also allowed time for participants to clarify and make additional responses to the questions.

Following the summary, moderators asked participants to individually fill out the remaining sections of the CPGI and the IBS. After completing the questionnaires, moderators gave each participant \$50 for their attendance at the session.

#### **Demographics and Gambling Involvement**

Problem gamblers ( $\underline{M}$  = 43.2,  $\underline{SD}$  = 13.7) were significantly older than non-problem gamblers ( $\underline{M}$  = 28.0,  $\underline{SD}$  = 11.1),  $\underline{t}$ (1,43)= -4.1,  $\underline{p}$  <001. They ( $\underline{Mdn}$  = 7, "Some College") also had a lower level of education than non-problem gamblers ( $\underline{Mdn}$  = 10, "Some University"), Mann-



Whitney  $\underline{U}$  = 146.5,  $\underline{p}$ < .05. Problem gamblers had significantly higher IBS scores ( $\underline{M}$  = 122.9,  $\underline{SD}$  = 23.5) than non-problem gamblers ( $\underline{M}$  = 89.0,  $\underline{SD}$  = 21.1),  $\underline{t}$ (1,43) = -5.0,  $\underline{p}$  < .001). However, problem gamblers did not differ significantly from non-problem gamblers with respect to marital status, job status, and total household income.

In addition, with respect to the past 12 months, problem gamblers indeed scored significantly higher than non-problem gamblers on the PGSI ( $t_{-}(1,43)=-15.3$ , p<.001). In the past 12 months, problem gamblers played VLTs significantly more often ( $M_{-}=5.8$ ,  $SD_{-}=1.3$ ) than non-problem gamblers ( $M_{-}=2.7$ ,  $SD_{-}=1.4$ ) ( $t_{-}(1,43)=7.7$ , p\_<.001). Problem gamblers also spent significantly more time playing VLTs ( $M_{-}=3.4$  hours,  $M_{-}=2.2$ ) at each gambling session than non-problem gamblers ( $M_{-}=0.4$  hours,  $M_{-}=0.3$ ) ( $M_{-$ 

# **Primary Analyses**

In accordance with Krueger and Casey's (2000) guidelines for qualitative research, we processed the qualitative data by reviewing the transcripts and videotapes of each of the focus groups, and collating statements pertaining to questions. After we reviewed each group of collated statements, we identified the more frequent statements as common topics. We then further reviewed the common topics and grouped them into core themes. For each of these core themes, we rated the participants' responses or comments with respect to frequency (i.e., how many times something was said), specificity (i.e., how detailed an observation was), emotionality (i.e., how enthusiastic or intense an answer was), and extensiveness (i.e., how many different people said the particular comment) (Kreuger and





Casey 2000). We found eight themes to fully characterize the answers of participants.

Altogether, we felt that the core themes represented the full range of participant's responses.

As shown below, for each core theme, we then compared problem gamblers with non-problem gamblers, and we provided quotations, i.e., data extracts to illustrate or support the meaning of a particular theme in accord with Wilkinson (2003).

# Preferred traditional games

This theme expressed a preference for games having traditional types of symbols and play hierarchies that were similar to Royal Spins.

*Problem gamblers:* Problem gamblers expressed a preference for games with traditional symbols like Royal Spins. They said that they enjoyed these kinds of games more than entertainment-focused ones because they could win more money on these games, and that they were more likely to payout. A participant from Group 5 said:

"Royal Spins, or one of those, you've got an opportunity... you know if you've got a row of sevens or something like that, of making two or three or five hundred dollars in one hit."

Non-problem gamblers: Non-problem gamblers said that they liked traditional games like Royal Spins because these kinds of games were not overpowering to their senses. They said that they liked Royal Spins mainly because it was not confusing, and was simple to play. They said that they liked traditional games because they knew what they were doing when they played the games. With reference to Royal Spins, a participant from Group 6 said:

"I'd take the more straightforward one."





### Liked bonuses and free spins

This theme involved answers that expressed a liking of bonuses and free spins.

*Problem gamblers*: Problem gamblers said that they loved obtaining free spins and bonuses. They indicated that they found it hard to attain bonuses on Tailgate Party and that this belief contributed to their dislike of the game. Problem gamblers said that they sometimes postponed playing, and watched for games that had a higher bonus. A Group 1 participant stated:

"If the bonus features are high, I'd play it. If it's low, I didn't play it."

*Non-problem gamblers*: On the other hand, non-problem gamblers said that they liked free spins and bonuses, simply because everyone likes something free. That is, they said that although they enjoyed receiving bonuses, they were not an important event in their lives.

# Liked winning bigger prizes

This theme refers to statements expressing a preference for wanting to win a substantial prize.

Problem gamblers: Problem gamblers said that they wanted to be winning bigger prizes frequently. They reported that they focused primarily on playing the VLT game, as they inserted progressively larger quantities of money into the machine. They said that they kept playing and putting in money because they were hoping for another big win. One participant indicated that the memory of their first big win was as an important reason for continuing to play. A participant from Group 3 explained their goal as:

"You go there to win, number one."

Non-problem gamblers: Non-problem gamblers reported that they found winning was a pleasant experience but it was not the main goal of the game. It was a way of spending some time and a bit of money and then leaving the VLT machines.





### Preferred winning indicators

This theme refers to indicators such as bells, sounds, and lights associated with winning.

*Problem gamblers*: Problem gamblers expressed an intense enjoyment of the sound of money falling into the machine and the musical sounds associated with the games. These sounds appeared to almost mesmerize them and entice them to continue playing. A participant from Group 5 gave this description:

"The way they have the music arranged in there, with all the machines playing different tunes, it can hypnotize you and put you into a trance."

Non-problem gamblers: Non-problem gamblers said that they enjoyed hearing sounds associated with money and anything that indicated a win. However, they expressed these sentiments less strongly in contrast to problem gamblers. A Group 4 participant provided this comment:

"Lobster Mania, that's what I like. All the "lobster noise"."

#### Preferred Tailgate Party

This theme relates to statements of preference for Tailgate Party or other similar games.

Problem gamblers: A few problem gamblers reported that they enjoyed various aspects of Tailgate Party, e.g., style of game, amusing sounds, and playfulness. A participant in Group 1 Described Tailgate Party as:

"It's just a funny game putting you to play football."





*Non-problem gamblers*: Non-problem gamblers expressed a liking for entertainment-focused games, especially Tailgate Party and *Texas Tea*. They said that they enjoyed the flashiness and stories that grasped their attention. A Group 4 participant said:

"I like the colors and the flashy stuff... the poker ones, they bore me because they don't have animation there."

Played for entertainment, smaller prize

This theme pertained to statements expressing the idea that participants were playing VLTs for entertainment and that they were satisfied with smaller prizes.

*Problem gamblers*: Only a minority of the problem gamblers indicated that they played VLTs mainly for entertainment.

Non-problem gamblers: Non-problem gamblers said that they gambled to pass the time away, and to use their surplus change while waiting for others. They seemed to be entertained by playing VLTs in a relatively passive way rather than being intent in winning money as was the case for problem gamblers. A Group 4 participant described playing VLTs as:

"Well normally when I play it's when I'm waiting for somebody, or if I'm drinking beer at the bar; it's not too bad."

Involved luck, no skill or strategy

This theme refers to statements that indicated there was only luck involved with VLT gambling.

*Problem gamblers*: Problem gamblers said that there was some luck or chance involved in playing. They remarked that VLT machines were programmed, and that they just hoped for





luck in trying to win. A Group 1 participant described it as:

"Machines have the strategy; we hope for luck."

Non-problem gamblers: Non-problem gamblers said that they did not like to have a strategy and they did not want to think about playing the game. They indicated that winning was a fluke. A participant from Group 4 expressed the chance of winning as:

"No game is luckier or pays out more than others, and there is no real strategy that works; some people are just lucky, it is all the same."

Involved both strategies and beliefs

This related to statements expressing the belief that there was strategy and skill involved in playing VLT machines.

Problem gamblers: Problem gamblers expressed the idea that if the machines had just paid out a large quantity of money, they would expect two or three days to pass before it will pay again. They believed that Royal Spins was more likely to payout, and that since more money goes into this game, more should come out. They reported using the stop button. They said that they logged in and out to fool the machine, and thought a person will intuitively know whether the machine was going to pay out. Problem gamblers also said that they increased their bets if they started to win more. Many reported talking to the machines, cashing out on even numbers, and feeling they are more likely to win on games like Royal Spins. After a losing streak they felt Royal Spins would pay out and that the next spin would always be the winning spin. They indicated that all their strategies were intended to control or fool the game. A participant from Group 3 had the following strategy:





"I've seen myself rub the screen and say come on, pay me."

Non-problem gamblers: Most non-problem gamblers indicated that they heard about other people's strategies but said that they did not act on those beliefs. It appeared that many of their strategies had to do with conserving money. These sometimes included switching games, but only out of frustration, boredom or not wanting to waste money, and not as the result of a game plan. A Group 4 participant stated:

"I switch around so many times; I get so bored with games."

#### **Discussion**

Problem gamblers played VLTs more often, and they spent more time in a typical gambling session and money in a typical month while playing VLTs than non-problem gamblers; these results are consistent with those in the literature (Doiron and Nicki 2001; Schellink and Schrans 2002). Most importantly, they strongly suggest that the regular, frequent VLT players of the Burns' (2005) focus groups may well have consisted of many problem gamblers. This assertion might also apply to the make-up of focus groups employed by the gambling industry in general.

In addition, consistent with the findings of this study, it was expected that greater experience of playing VLT games by problem gamblers would have resulted in many more opportunities for the reinforcement and acquisition of themes that were found to characterize their opinions and beliefs.

## **Most Salient Themes**

Of the eight themes noted above, four themes in particular seem to best demonstrate





important differences between problem and non-problem gamblers relevant to the purpose of this study. These were Preferred traditional games; Preferred winning indicators; Liked winning bigger prizes; and Involved both strategies and beliefs.

With respect to Preferred traditional games, both types of gamblers preferred traditional games such as Royal Spins- but for very different reasons. Problem gamblers preferred traditional, winning-focused games because they felt they could win more money on them, and they paid out larger amounts. That is, primarily, problem gamblers were playing VLT games like Royal Spins to win money and not to be entertained. These results are consistent with qualitative findings of Griffiths (1991) and Fisher (1993) who reported fruit machine players in arcade galleries to be motivated by the obvious excitement of winning money. On the other hand, non-problem gamblers enjoyed games like Royal Spins simply because these games were less complicated and did not confuse the participants when they played.

With respect to Winning indicators, problem and non-problem gamblers enjoyed the experience of winning; however, the lights and sounds associated with winning meant much more to problem gamblers. For example, problem gamblers reported that they did not even look at the screen; they put their head down and just keep pressing the "spin" button until they heard a winning sound. This behavior resembles that of the majority of regular fruit machine players in the Griffiths (1991) qualitative study who played as if they were "on automatic pilot". Such trance-like behavior exhibited by regular players and the problem gamblers of this study is very indicative of dissociative reactions noted by Jacobs (1986; 1988) and others (Diskin and Hodgins 1999; Gupta and Derevensky 1998), as being as being a critical experience of problem or addicted gamblers. In contrast, non-problem



gamblers liked knowing that they won and enjoyed the sounds and lights more as part of the entertainment of playing. The finding that lights and sounds associated with winning are a source of stimulation for VLT players in general has been noted by Griffiths (1993), and also by Fisher (1993) in her observational research in arcade galleries.

With respect to Winning bigger prizes, problem gamblers were obsessed by hopes of large wins and they played VLTs primarily to win and not just to pass the time. They described how they would chase their losses in hopes of the occurrence of the next big win. In group meetings, problem gamblers spent much of their discussion time talking about topics related to winning. In contrast, non-problem gamblers liked winning, but it was not a major disappointment if they did not win large amounts of money. These results are in keeping with the design characteristics, (i.e., traditional graphics, large payouts of winning-focused games in general), and are consistent with claim of the big win as being particularly important for the development and maintenance of problem gambling made by a number of gambling researchers, (e.g., Custer 1984; Griffiths 1995; Weatherly *et al.* 2004).

Lastly, with respect to having strategies and beliefs, problem gamblers believed that they could control the outcome of games (i.e., illusion of control), and that the occurrence of payouts influenced immediate subsequent payouts (i.e., gambler's fallacy). They specifically mentioned Royal Spins, a winning-focused game, as a game where a payout would follow a losing streak. In contrast, non-problem gamblers mentioned switching games mainly out of frustration or boredom rather than strategy. The expression of these faulty beliefs by problem gamblers in group meetings is consistent with the finding of this study that problem gamblers scored significantly higher on the IBS than did the non-problem gamblers. Furthermore, the causative link between faulty gambling beliefs and problem gambling is well supported in the





qualitative and quantitative gambling research literature (e.g., Griffiths 1991; Ladouceur 2004; Jefferson and Nicki 2003; Jefferson *et al.* 2004; Joukhador *et al.* 2004).

#### Limitations

A limitation of this study was that since the sample was self-selected and from a relatively small population of Fredericton (approximately 85,000), New Brunswick, Canada, generalization of findings to other settings might be restricted. In addition, the demand characteristics of the study might have biased our findings. However, we believe that the influence of demand characteristics on our focus groups was not as strong as one might expect given that our focus groups involved an interactive kind of data collection. For example, as noted above, although members of each focus group were exposed to only one direct question about Winning bigger prizes, we found that all problem-gambler group members talked about the attractiveness of winning bigger prizes in response to many of the open-ended questions.

#### Conclusions

In conclusion, we suggest that these findings have implications for the Atlantic Lottery

Corporation and other agencies in Canada and elsewhere involved with the selection of new
games into the global marketplace. In this study, we have found by examining the subjective
experience of VLT gamblers that games that fit into a winning-focused category have great
appeal to both problem and non-problem gamblers. Moreover, they cater to motivational
factors, which are especially important to problem gamblers: the excitement of winning
bigger prizes, the experience of dissociative reactions, and their illusion of control of random
VLT outcomes. On the other hand, our examination of the subjective experience of gamblers





indicated that entertainment-focused games can be appealing to all VLT gamblers for their entertaining story content, diverse stimulus characteristics, and prospect for frequently winning small rewards.

At the same time, because a focus group design was used in order to understand the subjective experiences of problem and non-problem gamblers when playing winning-focused and entertainment-focused games, the findings of this qualitative research study may not be generalized to other locales in a strict sense (Charoenruk 2012). Instead, future studies should use a methodology perhaps involving both qualitative and quantitative research approaches that would allow for a generalization of our findings to other settings (Chaaroenruk 2012), and a further investigation of the theoretical importance of motivational factors noted above.

#### Implications for the Marketplace

Historically, VLTs were first permitted to be operated by the government of the province of New Brunswick in 1990; all of the other Canadian provinces soon followed New Brunswick's example (Azmier & Canada West Foundation, 2001). According to Hyson (2003), by the year 2000 there were approximately 3,000 VLTs in 800 locations in New Brunswick, i.e., one VLT for every 200 adults. Furthermore, according to McKenna (2008), who used statistics from all Canadian provinces, in 2000, gamblers put in "\$7 billion" (pp. 33) in VLTs and received only "average winnings of \$4.9 billion" (pp. 33). Thus, VLT usage appears to be rather lucrative for those involved in the operation of VLTs, and not so much for others. For example, VLT retailers in New Brunswick in the year 2000 obtained a profit of \$47 million while the government obtained a profit of \$53 million (Azmier & Canada West Foundation, 2001).

Obviously, governments and retailers in Canada and elsewhere appear to be addicted to





VLT revenue (Azmier & Canada West Foundation, 2001)! Unfortunately, it has also been estimated by Hyson (2003) that 96% of this revenue is derived from only 6% of the adult population who are regular gamblers.

Nevertheless, since it appears likely that the participants making up the regular or frequent player focus groups run by the *Atlantic Lottery Corporation* have substantial numbers of problem gamblers, we suggest that the gambling industry in general should be encouraged to assess the problem gambling status of potential focus group participants and use only non-problem gamblers for the selection of new VLT games into the marketplace. Secondly, we suggest that the gambling industry should be encouraged to introduce only entertainment-focused games into the global marketplace even though, at least in the short term, this may result in decreased overall revenue. Both of these suggestions are consistent with gambling industry's (Atlantic Lottery Corporation 2009) claim of wanting to promote "Responsible Gaming".



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