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## Electronic gambling machines: Influence of a clock, a cash display, and a precommitment on gambling time

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Oxford Press in 2007.

Serge Sévigny, Ph.D., is teaching at Laval University. He has been involved in gambling research since 2000, and his work aims at a better understanding of gamblers' thoughts and behaviours. He now works on studies related to video lottery terminals, gambling prevalence, and poker.

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## Abstract

This study investigated the influence of three features of electronic gambling machines (clock, cash display, and precommitment on gambling time) on gambling behaviour. Participants gambled with their own money in their natural environment. Using behavioural and self-reported measures, the study found that a majority of players reported the cash display as being a helpful feature for controlling gambling activities, but neither the clock nor the precommitment on gambling time device as being helpful. The authors concluded that the clock and precommitment on gambling time device may not be instrumental in promoting responsible gambling.

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## Introduction

The electronic gambling machine (EGM) is the most popular game among gamblers (see [Ladouceur, Jacques, Chevalier, Sévigny, & Hamel, 2005](#)). Although some EGM structural features may have a positive impact on gamblers' behaviours or thoughts ([Blaszczynski, Sharpe, & Walker, 2001](#); [Griffiths, 1993, 1999](#); [Ladouceur & Sévigny, 2002, 2003](#); [Loba, Stewart, Klein, & Blackburn, 2001](#)), other features may have either no impact or may even produce harmful effects ([Dickerson & Baron, 2000](#); [Griffiths, 1990, 1993, 1999](#); [Ladouceur & Sévigny, 2005](#); [Nova Scotia Department of Health, 1998](#)).

Internationally, various stakeholders have begun suggesting within their jurisdictions that the modification of EGM structure and/or features could help gamblers control their gambling activities and eventually prevent gambling-related problems ([Loto-Québec, 2002](#), p. 10). These new options are often embedded within a responsible gambling framework. For example, in Quebec, patrons can find the following devices on all video lottery terminals (VLTs): a permanent clock, a display of the amount of money remaining in terms of credits or cash, and four precommitment gambling time periods (15, 30, 45, or 60 min). In New Zealand, poker machines automatically stop at intervals of no more than 30 min and provide the gambler with certain information, such as the length of the gambling session, the total amount of money won or lost, and the opportunity to continue or to stop gambling ([New Zealand Department of Internal Affairs, 2005](#)).

In 2002, the Nova Scotia Lottery Corporation installed a permanent on-screen clock, cash display instead of credits, pop-up reminder of time spent playing, and mandatory cash-out after 150 min of continuous play. [Focal Research Consultants \(2002\)](#) showed that the clock, the cash display, and the pop-up reminder had a positive impact on gamblers' behaviours, attitudes, and perceptions. However, the mandatory cash-out feature did not affect the gamblers' behaviour. The most effective feature was the 60-min pop-up reminder, which resulted in a decrease in the length of time spent gambling. About 40% of players felt that the clock helped them to better manage their gambling time. Almost 50% reported that the cash display feature helped them keep track of the money spent.

Although these features could be useful for some players, few studies have examined the influence of the features on gamblers' perceptions and behaviours. The goal of this study is to examine the usefulness of the following three EGM features: a clock, a cash display, and the selection of a precommitment on gambling time.

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## Permanent clock

Increasing awareness of the notion of time spent gambling may have a positive influence on gamblers' behaviours. Keeping track of time could help a player respect their time limit and facilitate an informed choice as to whether the individual wants to continue or to stop gambling. In the context of promoting responsible gambling ([Blaszczynski, Ladouceur, & Shaffer, 2004](#)) and informed choice ([Blaszczynski, Ladouceur, Nower, & Shaffer 2008](#)), one can presume that the information conveyed by a clock could help players decide if they want to continue or to stop gambling. Furthermore, individuals are frequently influenced by situational conditions when making judgements about time (see [Fraisie, 1984](#)). Therefore, the availability of a permanent clock may decrease the possibility of underestimating the length of a gambling session and, ultimately, losing track of time.

However, this information could have less impact than expected if the patrons are more focused on the money spent rather than on the time they spent playing. The clock could even have a negative or an iatrogenic impact. At times, the clock could possibly be used by players in such a way that they would think they did not play long enough. Few empirical data have been published on the impact of a clock on gambling. This study will first assess whether players use the clock, and, if so, whether it has any impact on their decision to continue or to stop gambling.

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## Cash or credits display

Gambling with tokens instead of money might obscure or mask the amount of

money lost ([Griffiths, 1999](#)). With regard to EGMs, a credit instead of a cash display could be harmful to the gambler. [Loba et al. \(2001\)](#) showed that displaying cash information helps pathological gamblers end their gambling session sooner compared with displaying credits. [Haw \(2000\)](#) stipulates that displaying credit points may be a risky feature when gambling. However, Haw limited his observations to gamblers using only high-denomination bill machines and he did not compare credit with cash display. No research has yet confirmed the potential effect of various displays. This study examines the proportion of players using the cash as compared with the credit display, as well as players' perceptions of the usefulness of this feature in controlling gambling behaviours.

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## Selection of a precommitment on gambling time

In many jurisdictions worldwide, EGMs display a device forcing the players to select a precommitted gambling period. Players can usually choose between 15, 30, 45, and 60 min. Once the time is up, a pop-up message invites the players to continue to play for an additional period or to stop. How many gamblers actually stop playing after the first time limit has been reached? This study examines whether the players find this feature beneficial in controlling their gambling activities.

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## Method

### Participants

The research team visited 12 bars with VLTs, all located in Quebec City. In each bar, the owner or manager was asked for permission to conduct the study, and two accepted. Several days after acceptance, an experimenter returned to these two bars and invited all individuals who were playing a VLT to take part in the study. A convenience sample was formed comprising 38 adults. The participants' mean age was 52.4 years ( $SD = 17.8$ , min. = 22, max. = 74) and two thirds of the sample was composed of men (64%). The South Oaks Gambling Screen (SOGS; [Lesieur & Blume, 1987](#)) revealed that the sample included 24 no-problem gamblers (score of 0, 1, or 2 on the SOGS), 7 at-risk gamblers (score of 3 or 4 on the SOGS), and 7 probable pathological gamblers (score of 5 or more on the SOGS). The mean gambling frequency was 4.9 times a month ( $SD = 5.0$ , min. = 1, max. = 30), and the gambling session lasted an average of 81.1 min ( $SD = 65.3$ , min. = 5, max. = 360).

### Procedure

Participants gambled in their natural environment (local bars where the VLTs were located) using their own money. After a player sat down at a VLT machine to begin gambling, interviewers introduced themselves and asked if the player would like to

participate in a study. For those interested, at the end of the gambling session, the interviewers (a graduate student speaking French as the mother language, trained and supervised by the second author) asked the gambler to tell them the time without looking at a watch, as well as the amount of time spent gambling. Then, the gambler was asked the reason that he or she had stopped gambling. Those who reported having considered the time in their decision to stop gambling were asked how they had estimated the amount of time they had gambled. For all participants (including those who did not consider the time when deciding to conclude their gambling session), the study questionnaire was then administered, which included questions concerning the use of the cash versus credit display and the estimate of the amount of money spent. The questionnaires used are presented in [Table 1](#). A \$20 CAD gift certificate, to be used at a popular shopping center, was offered as compensation.

After the gift certificate was presented, the interviewer asked the participant if he or she intended to continue gambling on the VLT. Those who intended to continue playing were asked if they would suspend their upcoming VLT play in 20 min in order to engage in a supplementary interview consisting of a few questions (see [Table 1](#)). A total of 16 participants agreed to meet. The interview was conducted in French, the native language of the participants. Their mean age was 47.5 years ( $SD = 21.3$ , min. = 22, max. = 74) and the group was composed of 12 men and 4 women. This group included 10 non-problem gamblers, 3 at-risk gamblers, and 2 probable pathological gamblers (1 missing value). Participants gambled 6.6 times a month ( $SD = 7.4$ , min. = 1, max. = 30) and their gambling session lasted an average of 57.3 min ( $SD = 36.74$ , min. = 5, max. = 120).

## **Dependent Variables**

### *Clock*

Some of the questions were intended to determine whether gamblers noticed the clock, and if so, whether they used it (yes/no, moment, and frequency) and whether it played a role in their decision to stop or to continue gambling. The clock was also evaluated for whether it was helpful for the participant being on time for the optional appointment if he or she had agreed to this portion of the study. Two measures were taken: (1) Was the participant at least 5 min late or not, and (2) if so, how late was the participant (in minutes)? Finally, participants were asked about their perceived importance of the appointment (very important, important, not that important, not important).

### *Cash display*

In order to determine the potential effect of the cash display, we asked the participants a number of questions, such as the following: Did you notice that the credit display could be changed to a cash display? Do you prefer to use the credit

display or the cash display? After these questions, we inquired about the participants' perceptions of the usefulness of the credit and cash displays.

### *Selection of the length of the gambling session*

Gamblers were asked to report on the precommitment on gambling time feature. How many separate precommitments were made before quitting the gambling session? Did gamblers find this feature useful for controlling their gambling activities?

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## **Results**

### **Clock**

The majority of participants noticed the presence of the clock (89%). Two thirds reported using it sporadically. Concerning how frequently they used the clock, some participants stated that they never used it, whereas others used it as many as 10 times during their gambling session. For 73% of the participants (27 of 37), time was not considered an important factor when they gamble. For those who considered time as a factor for stopping their gambling ( $n = 10$ ), reasons given were "being on time for an event" (70%) or "respecting a gambling time limit" (30%). The last questions about the clock assessed gamblers' perceptions. Although 54% reported that the clock could be useful, 74% of the participants reported that it could not help them control their gambling activities.

Among the 15 participants (one missing value) who agreed to meet with the interviewer in 20 min, 6 (40%) were more than 5 min late ( $M = 30.5$ ,  $SD = 13.6$ , min. = 15, max. = 53). In fact, only five of the participants used the clock on the EGM to report for the appointment. Among them, three were on time and two were 25 min late. The two participants who were late reported the appointment as "important," two participants on schedule said it was "very important," and the other participant reported it was "not important."

### **Cash display**

The majority of participants were aware that the money could be displayed either in cash or in credits (37 of 38; 97%). Also, 86% reported using the cash rather than the credit option, and two thirds of the sample (61%) reported the cash display to be more useful, practical, easier for calculating the amount remaining, and more accurate than the credit display. More than half of the participants (58%) concluded that the cash display helps to control their gambling activities.

### **Precommitment on gambling time**

At the beginning of the gambling session, 17 gamblers chose a 60-min period, 5

chose a 45-min period, 9 chose a 30-min period, and 6 chose a 15-min period. The 60-min period was clearly the most popular choice (see [Table 2](#)). Furthermore, 7 players selected a second session, 3 players played three sessions, 2 players continued to play four sessions, and 3 played five sessions. Twenty-two players of 37 stopped playing after their first session (59%). When asked about the usefulness of this device, 74% of the sample (28 of 38 participants) said it was not useful and 79% mentioned that it does not help them to control their gambling activities. Most participants (82%) said that selecting a period of time did not generally make them stop playing once that period had expired.

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## Discussion

The study showed that the clock and the precommitment on gambling time appear to have little impact on helping gamblers to control their gambling activities. However, a majority of gamblers reported that the cash display feature is, at times, useful in controlling their gambling activities. The majority of gamblers used the cash rather than the credit display. The cash display appears to be informative about the amount of money played and could help control gambling activities. Because the cash display was the only one of the three features directly related to the participants' money, one could hypothesize that features related to money could help players more than features targeting time variables could. Losing money would appear to be a pertinent reason to stop gambling, whereas losing time was less important. As previously mentioned by [Focal Research Consultants \(2002\)](#), findings showed that the cash display helped gamblers keep track of the money they spent.

The clock was not perceived as a useful instrument to control gambling, even though it could provide relevant information and prevent underestimating the time spent gambling. As previously indicated by [Focal Research Consultants \(2002, 2004\)](#), the clock had no beneficial effects in helping gamblers in general to manage their play. Indeed, 60% and 71% of all players included in the Focal Research studies felt that the clock had no effect in helping them to manage the amount of time they spent gambling. The current study also showed that only 5 of 15 participants used the clock for their appointment, and two of them ended up being late. Thus, the majority of gamblers did not use the clock as a tool to help them stop gambling during that session. In the context of promoting responsible gambling ([Blaszczynski et al., 2004](#)), information conveyed by the clock did not seem to be a useful feature.

The same pattern emerged with the selection of a precommitment on gambling time. Participants used it because it was mandatory but it was considered as a non-significant tool in shaping their gambling pattern. Once the time period was over, the gambler could easily reactivate the EGM for another session. Few

players used it to make an informed choice about whether to continue or to stop gambling. This feature could not be considered as a very effective tool for promoting responsible gambling; players did not report it as useful in controlling their gambling activities. Because these conclusions are based on the perceptions of the participants, objective or behavioural measures will be needed to support this interpretation.

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## Conclusion

This study explored the usefulness of three EMG features: the clock, the cash display, and the precommitment on gambling time device. Although some EGM structural features may influence gamblers' behaviours or thoughts ([Blaszczynski et al., 2001](#); [Griffiths, 1993, 1999](#); [Ladouceur & Sévigny, 2002, 2003](#); [Loba et al., 2001](#)) and contribute to the development of problem gambling ([Dickerson & Baron, 2000](#); [Griffiths, 1990, 1993, 1999](#); [Ladouceur & Sévigny, 2005](#); [Nova Scotia Department of Health, 1998](#)), the current results suggest that two of the three features investigated, the clock and the precommitment on gambling time device, did not influence players' gambling patterns, whereas the cash display feature seemed to be helpful for controlling gambling activities.

Thus, contrary to our expectations that these structural features would influence gambling activities, results showed that the impact of these features is modest or even non-existent. Because these structural features were designed and implemented in the context of promoting responsible gambling ([Loto-Québec, 2002](#), p. 10), further research will need to provide empirical evidence before labelling them as preventive tools. However, other tools might be useful. Because the sample size was small and not randomly selected, and because the group comprised mainly non-problem gamblers, these conclusions must be interpreted with caution and generalization should be limited. Future studies using pathological gamblers need to be conducted before a definitive conclusion can be formulated on the usefulness of these features.

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## Tables

Table 1

Items presented to participants

**Items related to the dependent variables**

- Cq6. Did you notice a clock on the machine screen?  
 Cq9. Do you use the machine clock to check the time?  
 Cq10. How many times did you look at the clock while playing?  
 Cq11. When did you look at the clock?  
 Cq13. In general, is time an important factor for you when you gamble?  
 Cq13a. Did you consider the time when you decided to stop gambling today?  
 Cq13b. Why did you consider the time today?  
 Cq13c. When you decided to stop gambling, did you use the machine clock to check the time?  
 Tq14. Which time period did you select at the beginning of the session?  
 Tq15. Did you select additional time periods during the session?  
 Tq16. Which ones?  
 Mq17. Did you notice that the credit display could be changed to a cash display?  
 Mq18. Do you prefer to use the credit display or the cash display?  
 Mq19. Why?

**Items about perceptions**

- P1. Do you believe that the cash display is more useful than the credit display?  
 P2. Why?  
 P3. Does the cash display help you to better control your gambling activities?  
 P4. Please explain:  
 P5. Do you believe that the machine clock can be useful to you?  
 P6. How?  
 P7. Does the machine clock help you to better control your gambling activities?  
 P8. Please explain:  
 P9. Is the option of choosing a time period at the beginning of the session useful to you?  
 P10. How?  
 P11. Does the option of choosing a time period help you to better control your gambling activities?  
 P12. Please explain:  
 P13. Does the action of choosing a time period at the beginning of the session help you in respecting that period of play?

**Items for the meeting (sub-sample)**

- MET\_q1. When you decided to come meet me, what did you use to know that the time had come?  
 MET\_q2. How important was this meeting to you?

*Note.* The items were translated from the original French version.

**Table 2**

The number and percentage of participants according to their precommitment on gambling time

Initial time period	<i>N</i>	Reporting additional sessions ( <i>N</i> )	Reporting additional sessions (%)
15 min	6	3	50
30 min	9	5	56
45 min	5	4	80
60 min	17	3	18
Total	37	15	41

Keywords:

**Keywords**

EGM

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responsible gambling

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clock

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precommitment

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display

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