



REPORT: THE IMPACTS OF SIGNIFICANT WINS AMONG GAMBLERS

Summary of the results of the qualitative and quantitative studies

Contributions

Edited by Emmanuel Benoit

Authors: Marie-Line Tovar, Jean-Michel Costes, Emmanuel Benoit, Emilie Coutant, Baptiste Lignier, Lucia Romo

Peer Review: Sylvia Kairouz (Chair of Research on Gambling, Montreal), Gaëtan Devos (Catholic University of Louvain)

Project co-steering: Armelle Archour (SOS JOUEURS), Raymond Bovero, external expert in gambling, Jean-Michel Costes (Observatoire des Jeux), Maryse Gaimard (University of Burgundy), Bernadeta Lelonek-Kuleta, (Catholic University of Lublin), Baptiste Lignier (University of Burgundy Franche-Comté), Lucia Romo (University of Paris Nanterre)

Table of contents

Summary 3

Introduction 5

Background: the French gambling framework and prevalence data 6

Description of the project 8

1. Methodology 8

2. Samples and collection method 8

2.1 The qualitative study 8

2.2 The quantitative study 8

The international literature review 8

1. The notion of winning 9

2. Wins (losses) and risk-taking 9

3. Wins and cognitive distortions 10

4. Conclusions and perspectives for prevention and harm reduction 10

Lessons learned from the quantitative and qualitative surveys on the latest significant win 11

1. Gamblers in games of pure chance and their winnings 11

1.1 A characterisation of the last significant win determined by its use 11

1.2 One third of pure gamblers affected by a significant win 11

1.3 Four out of ten players have experienced a significant win in their immediate environment 12

2. Uses of winnings and impacts on the emotions, reactions and daily life of gamblers 13

2.1 One third of “winners” replay all or part of their winnings 13

2.2 Emotions: feelings of joy and happiness. 13

2.3 The role of chance recognised by all “winners” 14

2.4 More important impacts for recipients of several wins 14

3. A win in the entourage: the impact of “others” wins 15

3.1 The double experience of the significant win for themselves and for their entourage 15

3.2 Factors for an intensification of gambling 15

3.3 ...and reinforcement of erroneous beliefs.. 16

4. The different types of gamblers and their significant wins 17

4.1 Significantly different understanding of significant wins 17

4.2 Problem gamblers reported lower amounts of significant winnings 17

4.3 Six out of ten excessive gamblers replayed all or part of their winnings 18

4.4 Only half of problem gamblers experienced feelings of joy and happiness following a significant win 18

4.5 The desire to continue playing more present among problem gamblers 19

5. Problem gamblers and significant wins 19

5.1 Different levels of expectation and motivation for significant wins 19

5.2 Link between winning and problem gambling 21

5.3 Predictors of problem gambling among “winners” 22

6. Additional findings from the qualitative survey 25

6.1 The first win as a trigger for further play 25

6.2 Lessons learned in terms of prevention and harm reduction perspectives 25

Conclusions and perspectives in terms of prevention and harm reduction 27

1. Perspectives in terms of prevention... 27

2. Perspectives in terms of harm reduction 28

Perspectives for future research 29

Bibliography 31

Appendix 32

Executive summary

In order to better understand the mechanisms that encourage some gamblers to engage in problematic behaviors, the Society for Mutual Aid and Psychological Actions (SEDAP) conducted in 2019-2020 a study on the impacts of winnings on pure chance gamblers (lottery, scratching, slot machines...). This French project consists of three components : a literature review (2019), a qualitative study (2019) and a quantitative study (2020). It focuses on the gamblers' journey, and the winnings they consider "significant", focusing on the definition and context of their occurrence and the potential impacts of these wins on their emotions, cognitions and behaviors.

The main results...

Pure chance players and their winnings

Among pure chance gamblers who responded to the National Study on the Impacts of Significant Winnings (ENIGM) a third reported having obtained a significant win (32.4%) with a median amount reported of 358.4 euros (amount that cuts the sample in half). Significant wins are defined subjectively and according to different criteria: their financial value, their use or the time of their realization. For a third of the winners (32.4%), this significant win occurs rather between the 1st and 5th year of practice and four out of ten winners of significant wins (43.1%) reported they had experienced a significant win in their immediate circle (family, friends, spouse ...), before starting to gamble by their owns.

A multivariate analysis (logistic regressions), taking into account different factors, made it possible to

highlight that, everything else remained equal, the significant predictors of a significant win are the existence of a significant win in the surroundings (before the first gambling) and being an excessive gambler (ICJE>7+). Other factors play a lesser role such as gambling more than 20 euros in the last month or regularly (from a few times a week to daily practice), the practice of gambling before the age of 20, having been in debt in the past and having a high motivation score of the type "positive emotions seeking",

Impacts on behaviour, reactions, on everyday life and the use of earnings

Mentionned by seven out of ten winners, the most described emotions are "the feeling of joy and happiness" (72.9%) as well as the experience of a "good time" (73.2%).

One third of the "winners" declare they replay a portion or all of their significant winnings. Even if all of them do recognized the role of chance, it does not prevent some gamblers from developing false beliefs which refer to cognitive distortions (illusions of control, magical beliefs and superstitions ...).

The winnings and the problem gambling

Gamblers who have obtained or experienced a significant win in their close circle before their first gambling experience are 4 times more likely to be excessive players than others. In addition, replaying the winning in the same day, experiencing difficulties at the moment the win occurs (marital, financial, housing) and the presence of excessive gamblers in the entourage, can be considered as specific factors that can predict the occurrence of excessive behavior. At the opposite, the cash in of the total amount of the win and close relationships with family members constitute protective factors.

In this context, SEDAP suggests...

To carry out preventive education regarding the use of winnings. This awareness-raising effort should also focus on minors, because the presence of gamblers or excessive gamblers in their entourage facilitates their practice of gambling. SEDAP also recommends to revise the angle and content of advertising campaign speeches in order to reduce the effects of win overestimation (superpower, illusion of control, etc.).

Résumé

Afin de mieux comprendre les mécanismes qui incitent certains joueurs à s'engager dans des comportements problématiques, la Société d'Entraide et d'Actions Psychologiques (SEDAP) a mené en 2019-2020 une étude sur les impacts des gains marquants dans le parcours des joueurs de pur hasard¹ (tirage, grattage, machines à sous...). Ce projet se décompose en trois volets : une revue de la littérature (2019), une étude qualitative (2019) et une étude quantitative (2020). Il est centré sur le parcours des joueurs, et les gains qu'ils considèrent comme « marquants », s'intéressant à la définition et au contexte de leurs survenues et aux répercussions éventuelles de ces gains sur leurs émotions, cognitions et comportements.

Les principaux résultats...

Les joueurs de pur hasard et leur gain

Un tiers des joueurs de pur hasard ayant répondu à l'étude nationale sur les impacts des gains marquants (ENIGM) ont déclaré avoir obtenu un gain marquant (32,4 %) dont le montant médian déclaré est 358,4 euros (montant qui coupe en deux l'échantillon). Les gains marquants sont définis de façon subjective et en fonction de différents critères : leur valeur financière, leur utilisation ou le moment de leur réalisation. Pour un tiers des gagnants (32,4 %, ce gain marquant se produit plutôt entre la première et cinquième année de pratique et quatre gagnants de gains marquants sur dix (43,1 %) ont déclaré avoir vécu un gain marquant dans leur entourage proche (famille, amis, conjoint...), avant de commencer à jouer eux-mêmes à des jeux d'argent et de hasard (JAH).

Une analyse multivariée (régressions logistiques), prenant en compte différents facteurs a permis de mettre en évidence que, toutes choses égales par ailleurs, les facteurs prédictifs significatifs d'un gain marquant sont l'existence d'un gain marquant dans l'entourage (avant le premier JAH) et le fait d'être un joueur excessif (ICJE>7+²). D'autres facteurs tels que les dépenses de jeu supérieur à 20 euros au cours

du dernier mois ou le fait de jouer régulièrement aux JAH (de quelques fois par semaine à quotidiennement), la pratique de JAH avant l'âge de 20 ans, le fait d'avoir été endetté par le passé et d'avoir un score élevé de motivation de type « recherche d'émotions positives », jouent un rôle moindre.

Impacts sur le comportement, les réactions, sur la vie courante et l'utilisation des gains

Cités par sept gagnants sur dix, les émotions les plus décrites sont « la sensation de joie et de bonheur » (72,9 %) ainsi que l'expérience d'un « moment agréable » (73,2 %).

Un tiers des « gagnants » déclarent rejouer tout ou partie de leurs gains marquants. Le fait que le rôle du hasard soit reconnu par tous, n'empêche pas certains joueurs de développer de fausses croyances : ceux-ci font état de distorsions cognitives (illusions de contrôle, croyances magiques et superstitions ...).

Le gain marquant et le jeu problématique

Les joueurs ayant obtenu ou expérimenté un gain marquant dans leur entourage avant leur première expérience de jeu ont 4 fois plus de risque d'être joueurs excessifs que les autres. De plus, le fait de rejouer le gain marquant dans la même journée, de se trouver dans des contextes difficiles au moment du gain (conjugaux, financiers, logements) et la présence de joueurs excessifs dans l'entourage, constituent des facteurs spécifiques pouvant prédire la survenue d'un comportement excessif. À l'inverse, l'encaissement total du gain et une proximité de l'entourage constituent des facteurs protecteurs.

Dans ce contexte, la SEDAP suggère...

De réaliser une éducation préventive à l'utilisation des gains. Cet effort de sensibilisation devrait inclure également les mineurs, car la présence dans leur entourage de joueurs ou de joueurs excessifs facilite leur pratique de JAH. La SEDAP propose aussi de réviser l'angle et la teneur des discours des campagnes publicitaires afin de réduire les effets de la survalorisation du gain (superpuissance, illusion de contrôle...).

¹ Jeux d'argent qui reposent entièrement sur le hasard c'est-à-dire que seule la probabilité d'apparition intervient dans le jeu (voir encadré 1)

² L'Indice canadien du jeu excessif (ICJE) est un auto-questionnaire en 9 questions qui permet de déterminer le degré de dépendance au jeu. FERRIS (J.), WYNNE (H.), Centre canadien de lutte

contre l'alcoolisme et les toxicomanies, *L'indice canadien du jeu excessif*, Ottawa, Centre canadien de lutte contre l'alcoolisme et les toxicomanies 2001, 72 p.

Introduction

Emmanuel Benoit

Created in 1977, the Société d'Entraide et d'Action Psychologique (SEDAP), an association governed by the law of 1901 and recognised as being of general interest, has been involved since 2003 in numerous projects relating to excessive gambling. This experience formed the basis for the creation in 2014 of the Pôle d'Innovation et d'Expérimentation sur le Jeu Excessif (PIEJE), specialising in the field of gambling.

This centre develops basic and applied research projects, experiments with action mechanisms and develops tools for harm reduction, prevention and care in the field of gambling: its aim is to act against excessive gambling and to prevent minors from gambling. Among the most recent, several of the centre's projects stand out: the BIEN JOUER programme, a tool for educational prevention on the risks associated with gambling, experiments on visiting/meeting in bars (points of sale) via the community dimension, which constitute a device for strengthening the protective factors in points of sale (retailer/manager and one to two gamblers/users of the point of sale); mystery visits in points of sale to ensure minors are prevented from gambling.

In addition to these projects, the Étude Nationale sur les Impacts des Gains Marquants [National Study on the Impacts of Significant Wins] (ENIGM) provides elements for a better understanding of the mechanisms that lead some players to engage in problem behaviour. It is based on the hypothesis that significant wins during a gambler's career would be one of the predictive factors of problem gambling. This project also aims to improve the means used for prevention and harm reduction. Indeed, it allows us to describe the experiences of significant wins reported by gamblers, by understanding their behaviour following these wins (among different types of recreational, low-risk, moderate-risk or excessive gamblers), and by analysing to what extent and in what contexts they influence their gambling history, their cognitions and their emotions.

The ENIGM project was carried out in three stages: an international literature review on winnings, a qualitative study of the experiences of significant wins with 30 moderate to excessive gamblers aged 18 and over, and finally a national quantitative

study of 5,600 gamblers, derived from a general population of 10,004 individuals aged 18-64. The decision to carry out a qualitative survey prior to the quantitative study was intended to validate the hypotheses (role of the winnings, role of the amount of the winnings, etc.), to provide information on the circumstances and associated factors, to provide a good description of the players' experiences and, finally, to enrich the quantitative questionnaire. In this context, it has provided important new data about the impact of the first win and other significant wins and about the winnings of others, and has allowed for a more refined categorical typology of problem gamblers from the Canadian Problem Gambling Index (CPGI) screening scale.

The project took place over 2 years (2019-2020) with the support of specialised care structures and monitoring by a group of gambling experts, including the Catholic University of Lublin (Poland). Based on the French methodology of the quantitative component, this partner has initiated in 2020-2021, an identical project to survey the general Polish population.

The first results of ENIGM were analysed and made public by SEDAP in early 2021 ([Zoom Recherches no.1](#)). The publication of this report completes the data made available by placing this study in the context of research in France. They contribute to increasing knowledge about gamblers and their background, and about the factors associated with excessive gambling, in order to better adapt prevention and harm reduction actions aimed at this population. Indeed, as with other addictive behaviours, while the request for help often comes late, this type of research project reports on the situation. The proposals and recommendations resulting from ENIGM fully justify the development of tools such as *Sentinelles et Référents* in game retail outlets and BIEN JOUER with adolescents.

Background: the French gambling framework and prevalence data

Marie-Line Tovar

In France, gambling is characterised by a monopoly model of operation of lottery games (draws, scratch cards, etc.), both offline and online, physical sports wagering and horse-race betting outlets, "physical" casinos, and a monopoly of racing companies. [The law of 12 May 2010](#) (Law no. 2010-476 of 12 May 2010 on the opening up to competition and the regulation of the online gambling sector) opened up the online gambling market to competition, limiting it to three segments: sports wagering, horse-race betting and online poker. It also introduced a regulation of all gambling in the country, including a preventive component: "to prevent excessive or pathological gambling and protect minors".

At the time of the enactment of this text, there was little information documenting this activity in France. In 2010, the public authorities commissioned the French Monitoring Centre for Drugs and Drug Addiction (OFDT) to carry out the first nationwide survey on the levels of gambling and gambling practices. Prior to the opening of online gambling, this survey developed as part of the Santé publique France Barometer made it possible to quantify practices: in 2010, almost one person in two aged 18 to 75 (47.8%) declared having participated in gambling in the last 12 months (Costes et al., 2011).

According to the second general population survey conducted four years later, 56.2% of French people aged 15 to 75 had participated in gambling at least once in the past year, i.e. an estimated 30 million people (Costes et al., 2015). Regarding problems related to this practice, the share of players experiencing difficulties due to their gambling activity represented about 4.7% of the respondents. Of this population, 3.9% had a moderate risk gambling profile and 0.8% had a problem gambling profile. The latter was more pronounced for sports wagering (19.2%), "hard" poker³ (18.6%) and other table games (15.9%). The study also revealed that seeking help very much

concerns the minority of problem gamblers, with only a fifth (21%) having sought help for their gambling habits.

In this context, the Court of Auditors' report on the regulation of gambling⁴, published in 2016, highlighted the inadequacy of the prevention of excessive gambling and the differences in the application of the concept of responsible gambling by operators (weaknesses in the training of teams, the database of banned gamblers, etc.). Furthermore, the Court pointed out that online games "would benefit from being improved in line with advances in research and technology". In addition, it recommended structuring support for problem gamblers and, for the curative aspect, specified that pathological gamblers could be treated by the Centres for Addiction Care, Support and Prevention (CSAPA).

A lot of research has also analysed the developments of the internet and digital technology as facilitators of the relationship to and accessibility of gambling. Over the last few years, these developments have profoundly transformed the world of gambling: the multiplication of media, the proliferation of illegal sites, the diversity of the games on offer in the digital world, the development of a global market for sports competitions and the addiction to playing video games developed by younger people.

The third national survey carried out in 2019 by the Observatoire des Jeux and Santé Publique France observed a decline in the prevalence of gambling compared to the 2014 data. Thus, 47.2% of French people aged between 18 and 75 declared that they had gambled, i.e. a drop of 9 points in five years, while on the other hand online gambling has increased by 2.9 points (from 4.2% to 7.1%). Regarding problems associated with gambling, estimates from the Canadian Problem Gambling Index (CPGI) indicate a significant increase in the share of problem gamblers (from 0.8% to 1.6%) and stability in the share of moderate risk gamblers (3.8% to 4.4%, not a significant difference). Among the 18-75 year old population, that would mean 1 million moderate risk gamblers and 370,000 problem gamblers.

³ Expression meaning that the game is played face to face and not online.

⁴ The regulation of gambling - October 2016 Court of Auditors - www.ccomptes.fr - @Courdescomptes)

<https://www.ccomptes.fr/fr/publications/la-regulation-des-jeux-dargent-et-de-hasard>

In 2020, at the time that ENIGM was created, the organisation of gambling activities in France underwent a major shift via the privatisation of the incumbent operator, Française des jeux (FDJ), provided for by the PACTE law⁵ of 2019. A national gambling authority, the Autorité Nationale des Jeux (ANJ), was established in June 2020, with enhanced powers to regulate the gambling sector replacing its predecessor the Autorité de Régulation des Jeux en Ligne (ARJEL).

Box 1: Games of pure chance

Within gambling, games of pure chance are those that rely entirely on chance, i.e. only the probability of occurrence is involved in the game.

The draw game: A game of pure chance in which the player wagers a sum of money in the hope of finding some or all of the winning numbers drawn at random. The player ticks/selects one or more numbers from a grid. Loto and EuroMillions are payout games: the winnings are not fixed, but calculated according to the total wagers and the number of winners in at each level (the winners at the top level are those who have found all the right numbers). Keno, Joker +, Amigo are banking games: the winnings are known in advance, as they are calculated according to the amount wagered by the player and the number of correct numbers. Française des Jeux (FDJ) has a legal monopoly on draw games in France, both in the physical network and online (e.g., Loto, Kéno, EuroMillions, Amigo, etc.).

The scratchcard game: A game of pure chance in which the player buys a ticket (fixed stake at the start) which contains one or more scratch-off boxes, in order to discover winning symbols or numbers corresponding to sums of money. Stakes range from €0.50 cents to €10 and winnings from €1 to €1 million. FDJ has a legal monopoly on scratch card games in France, both in the physical network and online (e.g., Banco[®], Cash[®], Millionnaire[®], Morpion[®], Bingo[®]). In 2020, there were 36 different games.

The slot machine: A game of pure chance in which the player inserts a chip and then triggers the game by pulling a lever or pressing a button. Originally, the machines consisted of rotating mechanical reels with symbols drawn on them. Today, they are largely replaced by video machines where the symbols scroll on a screen. The aim of the game is to get a series of identical symbols or a winning combination of symbols. The stakes are low, ranging from €0.01 cent to €10 depending on the casino. Casinos have a monopoly on the management of slot machines and the this type of game is not allowed on the Internet.

⁵ Plan d'Action pour la Croissance et la Transformation des Entreprises, or Action Plan for Business Growth and Transformation

Description of the project

Marie-Line Tovar

1. Methodology

The methodological framework of the ENIGM research, as well as the quantitative questionnaire and the semi-structured guide, were defined by SEDAP's PIEJE unit and the members of the steering committee.

The research was conducted in three stages and included an international literature review of projects related to the study of winnings, a qualitative semi-structured study, targeting moderate-risk to problem gamblers (CPGI >5+), and a quantitative web-based study of participants in games of pure chance over the past 12 months. This choice of “pure chance” in the various samples was justified firstly by its high representativeness in all gambling games (nine out of ten gamblers declared that they had played scratch card games, draw games or slot machines during the last 12 months; Costes et al., 2020) but also because the proportion of chance in games requiring skill is not comparable to that of games of pure chance.

The typology of gamblers is constructed from the Canadian Problem Gambling Index (CPGI; Jackie Ferris and Harold J. Wynne, 2001), a validated screening tool. The questioning focused on the context and the reactions of gamblers following one or more significant wins. It measured the impact of the winnings on their behaviours, beliefs, thoughts, emotions and feelings, according to their gambling status (recreational, low-risk, moderate-risk or problem).

2. Samples and collection method

2.1 The qualitative study

It had to meet several objectives:

- Facilitating and enriching the design of the quantitative questionnaire: the semi-structured

interviews allowed for a broader exploration of the research topic.

- Exploring subjective dimensions that could not be addressed in the quantitative study.

After a recruitment phase of moderate and problem gamblers (CPGI of 5 to 7) carried out in care centres (CSAPA), by SOS Joueurs and in FDJ sales outlets (by the sociologist Emilie Coutant or the SEDAP *Référents et Sentinelles* partnership), telephone and face-to-face interviews were carried out with 30 gamblers aged 18 to 75, between September and December 2019, in compliance with data protection. They were transcribed and subjected to a thematic content analysis on the following topics: first win, significant win, a win in their entourage, characteristics and impact on beliefs, gambling practices, thoughts according to the typology of the gamblers.

2.2 The quantitative study

From a sample of 10,004 people aged 18 to 64, representative of the general population and selected according to the quota method, 5,600 players of games of pure chance answered a self-administered questionnaire on the Internet between 22 June and 25 July 2020.

The questionnaire lasted an average of 15 minutes and was divided into seven modules. Three of them focused on the player's current situation: socio-demographic characteristics, gambling practices and additional identifiers. Three other modules asked about the presence or absence of a significant event in the outcome of their games, the history of “winning” gamblers and, for multiple winners, the description of the first and last significant win. Finally, a last module looked at the impulsive traits of these gamblers.

Validated scales were included in the questionnaire such as the four areas of motivations to play: GMQF-15⁶, -social, coping, enhancement and financial-, the problem gambling screening scale (CPGI) and the French-validated impulsivity measurement scale UPPS-P; (Calzada Ribalta G., 2018).

The international literature review

⁶ Gambling Motives Questionnaire-Financial, validated in France in 2017 by Gaëtan Devos et al. International Gambling studies.

The objective of this literature review ([Zoom 'Recherches no. 3](#)) was to provide an overview of the knowledge and work carried out on the outcome (win or loss) of gambling. It was also a question of identifying methods and measurement tools that address the issue of significant wins and their consequences.

The purpose of the survey was twofold:

- To review the state of the art of international scientific analysis and work on wins and their impacts
- To identify the methods and measurement tools best suited to an in-depth exploration of the issue of significant wins and their consequences in the context of gambling practices in France.

1. The notion of winning

The notion of winning, even if it seems conceptually unambiguous (one wins or loses at a game) is in fact very poorly described by gamblers. Cognitive biases are common in this area and epidemiological surveys have always encountered this problem when asking gamblers about their wagering and spending.

The perception and self-reporting of actual gambling expenditure by gamblers is largely subject to bias. Studies have compared the amount of expenditure reported by gamblers under different expenditure estimation strategies proposed in the surveys (Blaszczynski, Ladouceur, Goulet, & Savard, 2006) or according to different strategies for collecting information on this subject (Blaszczynski, Ladouceur, Goulet, & Savard, 2008). They show significant differences between the outcomes obtained according to the strategies used. For some authors, the underestimation of declared expenses is accentuated for problem gamblers who tend to deny their real significance (Orford, Wardle, & Griffiths, 2013). Similarly, self-reported gambling outcomes were compared with activity data from different types of operator games and, on average, 34% to 40% of participants underestimated their losses or overestimated their winnings. The size of the gap is consistently associated with self-reported gambling problems, but the direction of the gap is not associated with gambling problems (Braverman, Tom, & Shaffer, 2014).

The studies on winners and the impact of winnings focus exclusively on “big winners”, with the criteria

for inclusion in this category varying greatly depending on the minimum amount of the winnings chosen by the researchers. A study of scratch card games shows that winners are mindful of winning but not of the amount of their winnings, while losers are mindful losing but also of the amount of their losses (Kassam, Morewedge, Gilbert, & Wilson, 2011). Other work has shown that “near wins” can have a similar impact to “big wins” on gambling behaviour and associated problems (Lim, Bowden-Jones, & Rogers, 2014) (Stange, Grau, Osazuwa, Graydon, & Dixon, 2017).

These different elements led to the choice of an innovative methodological approach for the ENIGM study, based on the concept of a significant win, itself based on the gambler’s perception without imposing any criteria, particularly concerning the amount of the win.

2. Wins (losses) and risk-taking

There is a lot of research showing the impact of previous wins on risk-taking during gambling. For example, one study of university students looked at whether previous experience of winning or losing led to risky betting. This study also assessed the positive or negative emotions of gamblers. Participants with an initial experience of winning bet more recklessly than those with an initial experience of losing. Winning at the start could be a predictor of at-risk gambling (Cummins, Nadorff, & Kelly, 2009). A simulation study of winning and losing blackjack situations with American university students shows that subjects are inclined to take more risks when their cognitive resources are not diminished and after they have won (Kostek & Ashrafioun, 2014).

According to numerous studies or clinical testimonies, a large proportion of problem gamblers retrospectively report a major victory

influencing their subsequent gambling behaviour.

The results of epidemiological studies analysing the potential link between the experience of a “big win” and problem gambling are less conclusive. A systematic search of the scientific literature produced in the area of risk factor analysis for problem gambling between 1990 and 2015 identified 15 studies published in 23 articles. A meta-analysis quantified the effect size of certain individual or relationship risk factors. This work established that a large win at the start of gambling was not significantly associated with later problem gambling (Dowling et al., 2017). However,

other studies have concluded in the opposite direction, demonstrating that big wins were a significant predictor of problem gambling (Williams et al., 2015) (Turner, Jain, Spence, & Zangeneh, 2008).

3. Wins and cognitive distortions

An experiment to measure the effect of the above outcomes on subsequent gambling decisions was conducted with a group of male students. It shows that continuous wins and losses influenced the next decision. In these two opposite situations of continuous wins or losses, there was a higher desire to win. In the context of continuous losses, the gambler's misbehaviour could persist. In the case of continuous winnings, positive outcomes increase the player's confidence in decision making due to the erroneous belief in the "hot hand" (a superstitious phenomenon that a person who achieves a positive outcome is more likely to succeed in further attempts) (Dong, Lin, Zhou, & Du, 2014).

In 2010, a UK study of over 500,000 sports wagers made by online gamblers took into account all win-loss streaks up to a maximum length of six. This research studied two classic cognitive distortions in gambling: "the belief in a 'hot hand'" and the "gambler's fallacy", i.e. the belief that if a particular event has occurred more frequently than normal in the past, it is less likely to occur in the future or vice versa. The selection of safer probabilities after a win and riskier ones after a loss indicates that gamblers who participate in online sports wagering expect their luck to be reversed: they are influenced by gamblers' mistakes and thus create their own "hot hands" (Xu & Harvey, 2014).

4. Conclusions and perspectives for prevention and harm reduction

Overestimation of winnings, differences in the definition of a "big win", and the fact that some "winners are mindful of the fact of winning, but not to the amount of their winnings" are the results of the literature review. They determined the choice, in the ENIGM project, of an innovative methodological approach, based on the notion of a "significant win", itself based on the perception that the gambler could have, without imposing any criteria, as to the amount of the win. Accordingly, a significant win is one that the player considers important in their career according to their own definition and experience, and which occurs in their own context.

These results also led to the consideration of several points in the qualitative and quantitative parts of the research: the role of wins on risk-taking in later games, erroneous beliefs or thoughts (the illusion of control, etc.), the place of previous winning patterns at the beginning of the gambler's career, their impact on the difficulty of quitting and cognitive measures.

Lessons learned from the quantitative and qualitative surveys on the latest significant win

Marie-Line Tovar, Jean-Michel Costes, Emilie Coutant, Emmanuel Benoit

1. Gamblers in games of pure chance and their winnings

1.1 A characterisation of the last significant win determined by its use

The concept of a “significant win” as defined by the players is based on different characteristics such as its value, its use - whether used to gamble or for an expense - or its occurrence in particular circumstances. It is therefore primarily the context in which the winnings occur, the level of gambling practice or the uses to which the players put the wins that validate this concept.

Wins were primarily defined as “significant” because of their financial value, whether high or low. Four out of ten players (39.8%) described it as a win in its entirety, two out of ten players (23.0%) described it as a win in terms of the amount and 10.0% described it as a win that was above their standard of living.

These gamblers also considered their winnings to be significant because of the circumstances in which they occurred: for almost one in five (18.0%), it came at the “right time” (e.g. just before the holidays) or during difficult circumstances (marital, professional, social or financial difficulties were mentioned by 8.0% of respondents).

These wins were also characterised in relation to gambling practices. For one in three players (34.0%), it was the low starting stake that made the profit earned significant. For others, these wins allowed them to “make up” for all or part of their loss (6.5%) or to continue playing (4.4%). Still other respondents considered these wins to be significant because they felt that they had been rewarded for their persistence in gambling: these wins came after a series of losses or a significant loss (3.7%) but were not enough to make up for the losses (6.5%).

The analysis by number of wins showed significant differences. The more significant a player's winnings were, the less they would rely on their financial value in assigning this criterion. Thus, the amount of the win defined the notion of “significant” for a quarter of players with a single significant win (24.6%), compared to 18.6% for those with several. The use of the winnings was also decisive, since 43.4% of those who had a significant win characterised it in this way, declaring that they had deposited the amount in their bank account, compared with 31.0% of the others. Lastly, a low starting stake was also a determining factor, as it led to a win being considered significant for nearly four out of ten players (37.4%), compared with a quarter of other players (25.8%). Conversely, more players who reported several big wins used them to continue gambling: 8.2% defined it as “a win that was fully replayed and lost” compared to 2.9% of players who reported a single win.

1.2 One third of pure gamblers affected by a significant win

Box 2: Methodology of the multivariate analysis

Multivariate analysis allows a set of variables to be considered simultaneously. Multivariate logistic regressions were conducted to measure the possible association between a variable of interest (reporting a significant win, problem gambling) and the variables likely to be associated with it included in the analysis (explanatory variables). A step-by-step top-down selection procedure for the explanatory variables led to the exclusion of some variables that did not contribute to the model; they are indicated as unselected in Table 1.

For Tables 1 and 2, all variables are included in the regression. For Table 3, seven regressions were run, one for each of the blocks of variables listed in the table. All block regressions were adjusted for gender and age.

Of all players who have played games of pure chance (draw, scratch cards, casino games excluding poker) in the last 12 months, one third declare that they had obtained at least one significant win since they first started gambling (32.4%) and one in ten (9.4%) indicated several.

Compared to those who did not report any significant wins, the reporting of wins was more frequent among gamblers aged 18-34 and among those who had experienced a period of indebtedness (Table 1, in the Appendix). A significant win is also reported more by the most regular players or those who spend the most, those who have heard of a significant win in their entourage, players who started gambling early and finally among problem gamblers (Table 2, in the Appendix). For all four areas of motivation to gamble, the analysis showed a significantly higher score among those who reported a significant win (Table 3, in the Appendix).

All these variables associated with the declaration of a win by the player can interact. A multivariate analysis (see method, Box 2, page 11) identified the factors most related, all other factors being equal, to the experience of a significant win (Table 6, below). In the end, the most significant predictors of a high score were the existence of such a score in the envi-

1.3 Four out of ten players have experienced a significant win in their immediate environment

Of the players who reported at least one big win, almost three in ten (28.6%) said they had won more than one. This repetition is more frequent among men (56.1%), whereas the presence of a single win is more common among women (52.6%).

The average age at the time of the significant win is estimated at 29 years and 10 months with an estimated average age of first play of 20 years and 10 months.

Chart 1: Motivations to gamble according to the number of significant wins

Among the players currently playing games of pure chance, the most significant winnings declared are for lottery games: scratch cards (Morpion®, Banco®, Cash®, Millionnaire®, etc.) and draws (Loto®, Kéno®,

Table 6: Multivariate analysis of factors related to the significant win

	ADJUSTED OR	P. Value	
Socio-demographics, gambling behaviour and motivations for gambling			
Man(ref. Woman)	1.13	0.061	<p>Reading guide</p> <p>The odds ratios (OR) measure the strength of the association between the significant win and another variable. When the odds ratio is higher (lower) than 1, this means that the occurrence of a significant win is more (less) frequent in a group studied in relation to the reference group. An odds ratio equal or close to 1.0 indicates that there is no association between the significant win and the variables studied.</p> <p>The P. value and the probability of being mistaken about the affirmation of an association between both variables. If it is lower or equal to 0.05, this means that the association is significant because the probability of being mistaken is lower or equal to 5%.</p> <p>So, in this table, we can see that gamblers with somebody who has experienced a significant win in their entourage, have 2.23 times more "luck" to report that they have had a significant win, this association is significant. The fact of being a man is not, on the contrary, significantly linked to reporting a significant win.</p>
18 to 34 years old (ref. 35 years old and +)	ns	ns	
Degree >BAC [A-level or equiv.] (ref. <=BAC [A-level or equiv.])	1.12	0.083	
Size of Conurbation pop. 2000 and + (ref. Less than pop. 2000)	0.83	0.019	
Paris conurbation (ref. Less than pop. 2000)	0.92	0.431	
Monthly income + €3,000 euros (ref. €3,000 or less)	ns	ns	
Not in debt but already there (ref. not in debt)	1.43	0.000	
In debt (ref. not in debt)	1.25	0.022	
Age at first time of gambling -19 years old (ref. 20 years old and +)	1.55	0.000	
Win in the entourage – Yes (ref. No)	2.23	0.00	
Expense: €5-€20 (ref. less than €5)	1.16	0.127	
Expense: €20 and + (ref. less than €5)	1.58	0.000	
Frequency: once a week or + (ref. Regularly)	1.44	0.000	
Game most invested in: scratchcard or slot machine (ref. draw)	1.28	0.000	
Low-risk CPGI	1.30	0.002	
Moderate-risk CPGI	1.56	0.000	
Problem CPGI	3.47	0.000	
Motivation: social	ns	ns	
Motivation: coping	ns	ns	
Motivation: enhancement	1.10	0.000	
Motivation: financial	ns	ns	

Source: ENIGM - SEDAP survey - 2020
ns: not selected

ronment before the first time they gambled and being a problem gambler (CPGI>7+). Other factors played a lesser role, such as spending more than €20 on gambling in the last month or gambling regularly (from a few times a week to daily), gambling before the age of 20, having been in debt in the past and reporting "trying to seek positive emotions" as their motivation.

EuroMillions®, Amigo®, etc.). These categories were cited by 41.2% and 32.7% of players respectively, while one in ten (11.2%) cited slot machine winnings, 3.00% other casino games, the remaining 11.9% sports wagering, horse racing and other gambling activities.

Players also indicated the amount of wins that they considered to be significant in their gambling career.

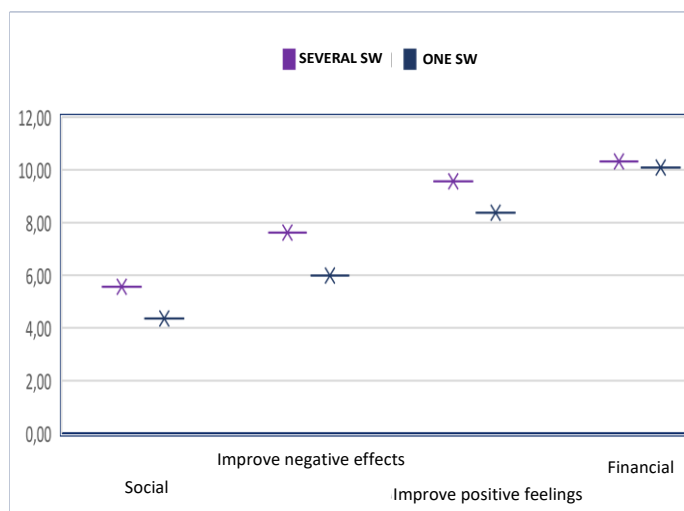
These amounts varied from €1 to €600,000. The median amount was estimated at €358.40, (€300 for multiple-winners vs €400 for single-winners).

Among the 25% of players who declared the highest amounts (3rd quartile), the win was €1,200. The median level varied according to the type of game: it was highest for draw games (€705), followed by slot machines (€535); the median amount for scratch games was the lowest (€152).

In terms of the player's gambling career, the arrival of this significant win occurred between the first and fifth year of gambling for one third of winners (32.4%) and for one in five winners after 10 years (21.7%). One in four players won early: in the first game (8.9%) or in the first year (15.9%).

Four out of ten gamblers reporting at least one significant win (43.1%) had this experience in their close circle (family, friends, spouse, etc.), before they started gambling themselves. There was a statistically significant difference between those who reported one or more significant wins: 38.3% and 55.1% of respondents respectively.

Among winners who reported one or more wins, all social and emotional motivations (Graph 1) (“coping with/escaping negative emotions, reinforcing positive emotions”) were significantly higher among players with one win than among those with multiple wins. Only the mention of financial motivation was identical according to the number of wins.



Source: ENIGM - SEDAP 2020 study

2. Uses of winnings and impacts on the emotions, reactions and daily life of gamblers.

2.1 One third of “winners” replay all or part of their winnings

Replaying all or part of their winnings concerns more than a third of players who declared at least one significant win (35.2%). Gamblers with multiple winnings had the highest propensity to replay everything: half (50.8%) of them replayed their last winnings in full within a day or a few weeks (compared to 28.9% for a single win). Furthermore, the smaller the significant win reported, the more the player replayed it in full: three out of ten winners (30.4%) who reported a minor significant win (€1-€100) said they replayed their entire winnings, compared with 18.1% of those who obtained the largest wins (€5,000 and over).

Players who did not replay their winnings (64.8%) mainly spent the money on “fun” (22.3%), “good times with family and friends” (19.2%) or saved it (19.5%). This situation primarily concerned players who had declared a single win.

Measuring changes in general gambling behaviour as a result of these winnings showed that seven out of ten (69.0%) gamblers said they had continued to gamble, with insignificant differences by number of wins. Regarding the evolution of their gambling, following the significant wins, the vast majority of players who continued to gamble stated that they had reduced the frequency of their gambling (69.5%), the number of gambling sessions (74.5%) and the amount of their wagers (71.7%), and that their desire to gamble had decreased (68.3%).

Following these wins, for some players the most significant increase was in the desire to gamble (23.4%), equivalent for single and multiple win winners (not a significant difference). Multiple winners were significantly more likely to take risks either by increasing their frequency of play (32.4% vs 19.3%), their play sessions (22.9% vs 15.4%) and the amount of their wagers (22.3% vs 18.2%).

2.2 Emotions: feelings of joy and happiness

Following their significant wins, the emotions most strongly felt (among a set of sensations suggested to

players in the questionnaire) by seven out of ten winners were “the feeling of joy and happiness” (72.9%) and the experience of a “pleasant moment” (73.2%).

Half of them ticked physical sensations of “agitation, euphoria, excitement” (52.2%) and “amazement, not being able to believe it, surprise” (51.1%). For four out of ten winners (39.7%), the feeling of “relief, renewed hope, returning optimism” was mentioned in relation to their gambling practices.

Negative feelings, which were generally less present, were also cited: “a feeling of anxiety, some fear” or “a feeling of physical discomfort (trembling, shortness of breath, need to sit down...)”. This was the case for 14.2% and 15.8% of respondents respectively. These negative reactions were more likely to be reported by players who accumulate several significant wins. They were described as much for small amounts won (€1-€100) as for large amounts (€5,000 and over).

2.3 The role of chance recognised by all “winners”

Among the reactions to the big wins, some players reported physical sensations and emotions based on mistaken beliefs (illusions of control, magical thoughts and superstitions, etc.). For example, one third of players (32.4%) reported having had “a feeling of strength, power, a sense of self-importance, pride, self-confidence and a ‘feeling’ of justice as if it was their turn to finally get lucky” (29.9%). More than one in four players (28.0%) felt “helped (by a loved one, God, fate, luck, etc.)”, while a quarter (25.2%) said they felt “in control, able to find the right numbers, strong”.

One question asked players about the evolution of erroneous beliefs following their wins (increasing, stable or decreasing). All the beliefs submitted to the respondents (the role of luck, the role of strategies, superstitions and the role of acquired skills) increased significantly following significant wins, and more so for winners of a single significant win.

Among the highest scores (Table 4, page 15), the belief that “the win was only the result of chance” had the highest average. However, this study also highlighted the high score of a classic cognitive distortion in gambling, namely the belief in the “hot hand”, i.e. the fact that a person who achieves a positive outcome is more likely to succeed in other attempts (Dong, Lin, Zhou, & Du, 2014). The belief in the intervention of luck and/or its presence at a moment in the player’s career was the third one cited, “your luck

was finally there, you had to believe in it”, which showed the ambiguity for the players between the role of chance and the notion of luck. Acknowledging that it was chance that generated the win does not prevent gamblers from developing false beliefs.

Table 4: Changes in beliefs following big wins

average out of 5	TOTAL	ONE WIN	SEVERAL WINS
1. That you can still have a significant win?	3.67	3.78	3.63
2. That you could elude chance from now on?	3.14	3.38	3.02
3. That the fact of continuing to gamble shall bring results (the more you gamble, the more you increase the probability of winning?)	3.37	3.58	3.27
4. That your own skills (ability, personal capacity) are efficient?	3.19	3.40	3.09
5. That your luck was finally there, you had to believe in it?	3.61	3.62	3.60
6. That this win was the result of a new strategy?	3.05	3.29	2.93
7. That luck is linked to the feeling that influences your way of playing?	3.33	3.48	3.26
8. That you have recovered the money of the operator/the State?	3.30	3.52	3.21
9. That this win gives you the option of playing again?	3.43	3.56	3.37
10. That your usual strategies (position, way of playing, numbers played, etc.) have made you win?	3.26	3.46	3.16
11. That this win was only the result of chance?	3.89	3.82	3.93

Source: ENIGM - SEDAP 2020 study

Note: The evolution of beliefs was expressed on an increasing scale from 1 to 5, with 1 meaning that following the win, the player believed very little in the proposition and 5 meaning that they believed much more.

2.4 More important impacts for recipients of several wins

For a majority of players, significant wins have had little effect on their life course. Among the positive consequences of the last significant win, an improved financial situation was the most frequently reported (32.3%), followed by improved management of daily life (19.1%), improved family life (16.6%) and improvement in terms of gambling practices (15.5%).

Conversely, one in ten (10.0%) reported negative consequences by mentioning the deterioration of relationships with others (friends, neighbours, etc.). This confirmed the results of a Canadian study on

the impact of a win on a gambler's entourage. It concluded that the win can have negative consequences such as pushing neighbours into loans or bankruptcy (Agarwal, Mikhed, & Scholnick, 2018). Finally, some reported a deterioration in their gaming practices (10.5%).

Gamblers who declared several wins experienced the most significant improvements in their life trajectory: management of daily life (24.0% vs 17.1%), family life (19.8% vs 15.3%). However, they were also two to three times more likely to describe significant negative consequences on their lives. Thus, one winner in seven described a deterioration in their family life following these winnings (14.5% vs 6.4% for "single-winners") and in their relationships with others (friends, neighbours for example; 14.5% vs 7.8%); about one in six mentions an increased impact on their addictive habits or practices, whether cigarettes, alcohol or illicit drugs (15.8% vs 6.7%) and gambling (16.5% vs 8.1%); and finally, even more strongly on their financial situation (17.7% vs 7.8%).

3. A win in the entourage: the impact of "others" wins

One of the most important results of this research was the importance of a win in the entourage, whether close or distant, whether it occurred before or after the first gambling experience and whether the player experienced a significant win themselves or not.

Among the descriptions given to describe a significant win, 5.4% of winners validated the proposition "it was another player's win (family, friends, contact, etc.)", including 2.2% exclusively. This choice was further validated by multiple winners (7.5% vs 4.6%). Already at this level, the outcomes of other players' bets entered into the definition of significant wins experienced by respondents.

A quarter (25.2%) of gamblers playing games of pure chance reported the presence of a significant win in their circle (family, friends, spouse, etc.), prior to their first contact with gambling. Among the population of players who had experienced it themselves, this affected four out of ten players (43.1%). More gamblers involved in multiple wins reported a significant win in their entourage prior to their first gambling experience (63.5% vs 36.5% for the single win; a significant difference).

3.1 The double experience of the significant win for themselves and for their entourage

Gamblers who experienced both a significant win for themselves and in their entourage were more likely to indicate that it occurred during the first year of gambling (20.2% vs 12.7% for those who did not have a significant win in their circle).

At the time of the win, 58.6% of them were aged between 18 and 29, compared with 44.2% of those without a significant win in their entourage, seven out of ten (70.7%) had incomes between €1,500 and €3,000 per month (compared with 63.2% of the other group) and more of them had experienced a period of indebtedness (61.9% vs 50.2%). In terms of gambling practices, their daily frequency and wagers were higher (respectively 45.3% vs 30.9% and 58.9% vs 43.0% for wagers over €20). Finally, four out of ten winners (41.6%) were problem gamblers (moderate to problem; CPGI 5 and above) compared to 12.1% of other gamblers.

These players also more frequently defined the significant win as "another player's" (9.2% vs 2.7% of those who did not declare a win in their entourage) and this win more often occurred "during difficult circumstances (marital, professional, social or financial difficulties)" (10.7% vs 5.8%); it was indicated as a win because it was completely replayed and lost (7.8% vs 2.0%). The life context of these gamblers at the time of the win was further affected by difficulties in their relationship for 15.3% (vs 3.7%) or difficulties at work (8.9% vs 4.8%).

3.2 Factors for an intensification of gambling ...

Half of these players replayed all or part of their winnings (49.9% vs 23.9% for those who did not have any significant wins in their close entourage) and the replayed winnings on the day were reported by 12.0% of all players (vs 1.8%).

Following this major win, players with a win in their entourage continued to gamble (69.0%) as much as players without a win in their entourage. However, their risk-taking was much more notable: the frequency, number of sessions and amounts bet were four times higher than those who had not experienced any wins in their entourage.

Among players who had a significant win in their close entourage before the first time they gambled and who replayed their own big wins, the proportion of those reporting a desire to continue playing (already described as the main marker of change in

gambling behaviour after a significant win) was twice as high as among other players (22.6% vs 10.7%). This result was in line with the conclusion of the study by Martinez et al. (2010) that knowledge of the amount won by another player increased the new player's illusion of control over the outcome of the bet, which in turn increased risk taking.

3.3 ...and reinforcement of erroneous beliefs

Those who experienced a win by "somebody else" and had a significant win reported reactions such as "feeling strong, powerful, sense of self-importance, pride, self-confidence" (43.1% vs 23.8% of others). Negative feelings such as "worry, some fear" and "physical discomfort (trembling, shortness of breath, need to sit down)" were experienced by 23.1% (vs 7.4% of the other group) and 26.0% (7.9%) respectively.

Erroneous beliefs were particularly prevalent among these winners, such as "the feeling of being in control, of being able to find the right numbers, of being strong" (35.3% vs 17.1%), "the feeling of justice" (39.7% vs 22.3%) and "the feeling of having been helped (by a loved one, God, destiny, luck, etc.)" (37.4% vs 20.8%).

The results of the qualitative study shed light on the positive or negative emotions felt and reported by players when they witnessed "somebody else" win:

- Some players were happy to see other players win, they felt joy: "as if it was me" or a form of sympathy that went as far as a very strong emotional feeling ("as much stress as for me and then wow"). High-risk gamblers indicated that they were happy to see other gamblers win because they felt that these winnings were "deserved": they considered them to be people "who worked a lot", "had a low income" or were in the "same category as them", or people who "played a lot".
- Other players reported negative emotions: "disgust, annoyance, irritation, rage", especially if it was an occasional player who won, because in their opinion "they don't deserve to win"; or if the win happened on a machine, that they had just left; or on a scratch card, that it was the one after the one they had just taken. For some, this feeling was so strong that it "cut off their desire to play".
- Some imagined that they missed out on a win, that "luck was not with them at the time", or that

they too could have won if they had played like the winners: "I should have played like them". They talked about the luck of the player, their own luck and/or the probability of winning for them: "It could have been me", "tomorrow it will be me!" "If they can win, so can I".

- Still others were envious of others' wins: "I wish that was me". These wins created "dissatisfaction", "frustration", "a feeling of having missed out", especially if they were playing the same game or on the same machine.
- These observations of "other people's" wins could lead to admiration, but also to criticism or even denigration of those they see as gamblers who engaged in recreational behaviour and practices or who placed low wagers.
- Some emphasised the competitive spirit that the other person's win generated in them. The display of "other people's" winnings in real time gave rise to the idea of competition between players.
- Others felt consolation: other people's winnings were reassuring, because "it was money that wasn't going into Française des Jeux's pockets, it was a consolation".
- And finally, some people felt sorry and compassionate for people with large wins who expressed their euphoria, because it reminded them of their own experience: "Winning big means a higher risk of becoming addicted".

The consequences of these observations on the practice of gambling were also collected in the qualitative phase:

- Problem gamblers pointed out that other people's winnings fuelled their desire to gamble: they were a temptation that they usually succumbed to. Seeing others win motivated them to play, often at the same game and imitating the winner's gameplay.
- The observation of these wins gave them new hope and confidence. The possibility of a win appeared stronger to them. They were motivated by others' gameplay.
- For some gamblers, wins were linked to the amount of the wager and therefore they questioned the winner's gameplay. Some people thought that the slot machine would no longer "pay out" or on the contrary that the machine

made you win. This contradictory thinking could be observed in the same gambler.

4. The different types of gamblers and their significant wins

4.1 Significantly different understanding of significant wins

Gamblers playing games of pure chance who participated in the qualitative and quantitative surveys and who reported significant wins in their gambling history were categorised according to the Canadian Problem Gambling Index (CPGI) typology. The results of the qualitative study and the multiple correspondence analyses (MCA) (Graph 2 in the Appendix) from the quantitative study showed that in the definitions of a “significant win”, there is a strong correlation between problem gamblers and characteristics related to gambling practices. Among the most important were the winnings defined according to their use in gaming habits: “It was a win that I've completely replayed and lost”.

The results of the qualitative study also reported that: the most significant was “*a win that the player has completely replayed and lost*”, so it was the memory of this significant loss that made the win “*significant*”. In addition, the player had the hope of “*doing it again*” and this win encouraged them to “*play again and again*”.

In gamblers' careers, the occurrence of a significant win, especially when it followed a series of losses or a significant loss, gave hope. This landmark win refocused the gambler on their gambling activities: “*this win replaced all my losses / covered part of my losses*”; but also in the context of its occurrence: “It happened in difficult circumstances”, generating, as the qualitative study states, a feeling of having recovered some or all of the stakes from the last few sessions of play: “*A win that exceeds the cumulative losses at a given point in time or over a given period of time*”.

Another important proximity concerned moderate gamblers and a significant win of more than €2,500, and its representation in terms of financial value: “*it was a win above my usual standard of living*”, “*by its value/ it was a significant amount*”. In the qualitative analysis, the players stated that this type of significant win: “*It was win that brought comfort, and even made it possible to afford luxuries or travel. It*

made it possible to dream about a life change, promoted the idea of a change in social status and the illusion that further wins would follow.”

4.2 Problem gamblers reported lower amounts of significant winnings

The proportion of players reporting a significant win varied according to their profile. Just over four in ten “no-risk” gamblers reported having had at least one big win (43.9%) compared to one in six “low-risk” gamblers (16.3%), one in seven “moderate-risk” gamblers (14.1%) and finally almost a quarter (23.7%) of problem gamblers.

Behind these statements lay very different realities in terms of expectations and therefore of the amounts corresponding to the notion of “significant”. Thus, problem gamblers declared lower amounts, with a median of €230 compared to €393 for low-risk gamblers, €457 for no-risk gamblers and €500 for moderate gamblers.

Problem gamblers and low-risk gamblers reported the smallest amounts: six out of ten problem gamblers (59.4%) and half of low-risk gamblers (52.4%) were affected by significant winnings of between €1 and €500, whereas amounts reported in excess of €500 were more likely to be reported by moderate-risk gamblers (52.1%) and recreational gamblers (49.6%).

Increased betting and high frequency of play among problem gamblers increased the opportunities for big wins and also increased the likelihood of getting more small wins than other gamblers. Indeed, 42.0% of them reported several significant wins during their playing career (vs 29.3% of no-risk gamblers and 14.0% of low- and moderate-risk gamblers). However, it was very difficult to establish an order/sequence between these two factors. A big win was more often reported by a problem gambler, but it was also normal for a problem gambler to report more big wins given the frequency with which they gambled. It was therefore no longer the financial value that was significant but the fact of the win, however significant it may be.

The qualitative study found that the context of a win was much more important than the amount of the win itself. It is more “*the moment in which they won*”, “*the way in which they won*” and “*the impact of that win on their moral well-being*” (rather than financial) that struck the winner and made their win “*a significant event*”.

The average age at the time of the last win was discriminating according to the type of player: the more difficulties the player had with gambling, the earlier the win was declared. Thus, excessive gamblers were on average 26 years and 4 months old at the time of their last major win, compared to 30 years for moderate-risk gamblers, 30 years and 6 months for low-risk gamblers and 31 years and 2 months for no-risk gamblers.

This information was related to the timing of the significant win in the players' journey: the higher the intensity of gambling, the sooner they reported having had the significant win after their first gambling experience. One third (33.9%) reported this win during their first experiences of gambling or during the first year of gambling (vs 27.2% for moderate gamblers and around 20.0% for no-risk and low-risk gamblers).

4.3 Six out of ten excessive gamblers replayed all or part of their winnings

The uses of winnings differed according to the severity of the gambling problems encountered: six out of ten problem gamblers (62.6%) replayed all or part of their winnings, including a quarter (21.8%) on the day they were won (vs 1.1% to 2.3% for other gamblers). It was the no-risk or low-risk gamblers who declared that they used this money the most for pleasure (buying things, having a good time, alone or with family; respectively 28.3% and 27.1%; 21.8% and 26.3% vs 8.8% and 7.7% for problem gamblers). With the exception of problem gamblers, all other gamblers used this significant win more for everyday expenses or saved it.

The qualitative study revealed that all the gamblers interviewed saw winnings as both *"money to enjoy"* and *"an opportunity to continue"* gambling, but that only the "moderate" gambler actually spent the money they had won on *"fun"*, problem gamblers generally only imagined the purchases, as they put almost all their winnings back into play. For some of them, there was no longer really the lure of winning, it was above all about *"the sensation they were seeking"*.

4.4 Only half of problem gamblers experienced feelings of joy and happiness following a significant win

The majority of reactions to a significant win increased with the level of intensity of gambling. The proportion of those reporting a *"feeling of calm/inner*

peace" and *"feeling of relief/hopefulness coming back/optimism coming back"* increased with the type of gambler: it doubled between no-risk gamblers and problem gamblers (from 23.7% to 45.9% and from 27.8% to 52.4% respectively). The proportion of those reporting a *"feeling of calm/inner peace"* and *"feeling of relief/hopefulness/optimism returning"* increased with gambler status.

For feelings of "worry", the increase was also related to the level of severity of their gambling. While it was very weakly felt among no-risk gamblers, *"some fear"* or *"physical discomfort"* following big wins was multiplied by two among low-risk gamblers and by nine between no-risk gamblers and problem gamblers (from 4.2% to 37.6% and from 4.9% to 42.6%).

As regards the place of luck, the impression of control and mystical beliefs, here too the share of players increased from 12.3% to 50.6% for *"the ability to find the right numbers/being strong"*, from 17.1% to 50.9% for the *"feeling of justice"* because it is one's turn to *"be lucky"* and from 18.2% to 44.8% for the feeling of having been helped (by a loved one, God, luck, etc.)

Conversely, while the feelings of *"joy and happiness"* and the notion of *"pleasant moment"* were identical for the first three groups, i.e. eight out of ten gamblers (recreational, low-risk or moderate-risk gamblers), they are described by only half of problem gamblers.

In the verbatim of the qualitative study, the majority of moderate and problem gamblers express *"joy"* as their primary feeling. Other feelings are reported such as *"the disturbing aspect of the win"* or the *"feeling of importance"* that the win brought. "Moderate" gamblers were more likely to talk about being *"surprised"* and *"keeping their cool"*.

Among problem gamblers, other feelings were evoked: the *"euphoria"* or *"explosion of joy"*, the *"relief"* and *"renewed hope"* when the money covered debts, the *"pride"* and *"feeling of power"* in front of other players and *"not believing it"* (due to the fictitious nature of the winnings before their real payment or the fact that it came after a phase of losses).

Negative feelings were also reported, such as *"uneasiness"* about these winnings that they had *"entirely replayed and lost"*.

Among the "moderate" gamblers, some believed *"[they had] been lucky"*, and imagined *"what [they were] going to do with the winnings"*, and mentioned

the rewarding aspect of winning. Other rarer thoughts were described such as “*I could have won more*” and “*you have to keep gambling all your life*” or imagining the risk of losing everything and having the reaction of temporarily stopping playing. Among problem gamblers, some held superstitious or even mystical beliefs: “*this casino brings me luck*”, “*my grandmother gave me the gift of winning*” and “[*they*] *found it hard to believe*”.

Among “moderate” gamblers, thoughts were more oriented towards the intended use of winnings, while among heavy gamblers, half of the respondents thought that “*replaying would mean that the winnings would continue to fall*”. For some problem gamblers, it was only after they had “*played it all again and lost it all lost everything*” that they thought about what they could have done with the winnings if they had kept them. Others imagined that they could have “*won more*”, that they had to “*play more and more often*”.

Some felt that this win was “*legitimate given the amount of money invested*” since the start of their gambling.

4.5 The desire to continue playing more present among problem gamblers

CPGI Classification	CPGI Typology	ENIGM Qualitative Study Typology
3 to 7	Moderate gamblers	Extreme moderate gamblers: 5
Higher than 7	Problem gamblers	Intermediate problem gamblers: 8 to 15
		Extreme problem gamblers: >15

Changes in gambling behaviour following major wins were more pronounced among moderate and problem gamblers and more pronounced in the “desire to continue gambling”. Two groups could also be distinguished: on the one hand, “moderate” gamblers (22.5%) and problem gamblers (35.0%) and on the other hand, no-risk gamblers (5.6%) and low-risk gamblers (6.8%).

Few “moderate” gamblers reported an increase in their frequency of play or betting levels, and half of them say that they had “*remained reasonable or slowed down their pace of play*”. The majority of problem gamblers felt that this big win increased

their frequency of play and their betting. For all problem gamblers who had significant wins, it was these winnings that triggered “*problem and/or frenzied gambling*”.

5. Problem gamblers and significant wins

5.1 Different levels of expectation and motivation for significant wins

The qualitative phase of the study focused on gamblers with a CPGI greater than 5: a proportion of “moderate” gamblers (5-7) and “problem” gamblers (CPGI >7). The results of this study have made it possible to distinguish two blocks within the problem gamblers, differentiated by clear-cut expectations about their gambling practice in terms of the significance of significant winnings or their motivations for gambling. These expectations increased with the level of the CPGI score: the higher the gamblers’ expectations of their games, the more they expected to win, the more risk and harm they experienced in their relationship with gambling, the more different the notion of a big win would be, as would their post-win behaviour and the use of the money they have won.

To simplify reading, a new name will be used for these three groups:

Classification ICJE	Typologie ICJE	Typologie Etude Qualitative ENIGM
3 à 7	Joueurs modérés	Joueurs modérés extrêmes : 5 à 7
Supérieur à 7	Joueurs excessifs	Joueurs excessifs intermédiaires : 8 à 15
		Joueurs excessifs extrêmes : >15

- “Extreme moderate” gamblers stated that they played for the fun aspect of gambling and the adrenaline it provided, for the surprise of winning (“*the pleasure of winning is that of being lucky and being surprised by the win*”); for the “immediate winnings” (“*small sums*”, which “*pay for extras*”); or for “*playing with others*”.
- “Intermediate problem” gamblers indicated that they gambled for the lure of winning (i.e. to have “*easy money*” to afford luxurious pleasures, but also “*money to live on*”); to pass the time, to fight against boredom; or for the pleasure of gambling

in the sense of *“confrontation with chance”*, but also for the game itself (*“to see my number fall”*).

- “Extreme problem” gamblers stated that they gambled mainly to fill a void (*“to escape loneliness or stress, to decompress”*); in order to supplement their income *“to bring in money to finish the month”*, *“to have money coming in”*, *“to come back”*, in other words to recuperate losses linked to gambling; and also in the hope of a *“life-changing experience”* thanks to *“a large sum”* (*“I’m waiting for my luck to arrive”* / *“I’m waiting for a miracle”*).

In the qualitative study, gamblers described how they planned to use their winnings and the implications for their gambling and their lives:

- “Moderate extreme” gamblers saw a significant win as a way to *“indulge themselves”*, *“afford comfort, luxury”*, or a *“possible improvement in daily life and social status”*. They believed that a significant win would be followed by *“small wins”*. They also had the impression that they could recover *“the operator’s or indirectly the State’s money”*.
- “Intermediate excessive” gamblers considered that a big win allows them to *“afford weekends away and trips”*, *“to continue gambling”* and that following a significant win, the *“winning phase would continue”*. It doesn’t matter how much, it’s *“the expectation of winning, the imagery of winning ratios that satisfies”*. The idea of a significant win also holds out *“the hope of not having to work anymore”*.
- “Extreme problem” gamblers believed that big wins would allow them to *“play again”* and *“recoup some of their losses”*. But they indicated mistaken beliefs and more frequently certain feelings: *“The idea of omnipotence, of dominations, of personal capacity, of feeling blessed”*.

An identical breakdown was carried out in the quantitative study (546 gamblers playing games of pure chance who declared at least one significant win: 115 “extreme moderate” gamblers, 299 “intermediate problem” gamblers and 133 “extreme problem” gamblers). Of the problem gamblers, 69.0% were so-called “intermediate” gamblers and 31.0% were so-called “extreme” gamblers.

The differences between the three groups of players confirmed key points of the qualitative study and completed the analysis, when the numbers were sufficiently robust.

Comparing the characterisation of the “significant win” among these three populations, we saw that the more the player was having difficulties with gambling, the more the win was defined according to the outcome of previous wagers: “the win that replaced all or part of the losses” was cited by 10.5%, 12.2% and 17.8% of respondents in all three groups. The “win that was not enough to make up for the losses” was mentioned by 9.7%, 11.2% and 14.5% of people. The “win that came under difficult circumstances” was chosen by 7.3%, 12.4% and 16.9% of people. Conversely, the proportion of gamblers decreased between the three groups for *“winnings deemed to be above the standard of living”* (15.4%; 11.7% and 8.8%), *“winnings received”* (33.6%; 21.0% and 14.3%) and winnings with a low initial stake (25.0%; 20.5%; 18.8%).

The minimisation of the amount of the win according to the typology of gamblers was validated: the differences were significant between the three groups for the declared values of €1 and €100 (17.3%; 25.0% and 32.9%) *vs* for the amounts of €500 to €1,500 (24.6%; 20.8%; 12.8%)

The place of the first significant win experience in relation to the severity of gambling was confirmed at this level of detail, the more difficulties the gambler was currently experiencing with their gambling, the more they report having made their significant win the first time they gambled (4.0%, 10.2% and 15.6%). This was also the case during the first year of gambling (16.7%; 21.2% and 23.9%)

In terms of context, as noted elsewhere, it was a difficult family situation (difficulties in the couple) that most differentiated the three groups of gamblers: 5.6%; 22.6% and 30.2%.

The use of this significant win was centred on continuing to gamble. Replaying one’s winnings in full is significantly higher among “extreme problem gamblers” (72.3%), followed by “intermediate problem gamblers” (58.3%) and finally “extreme moderate” gamblers” (24.1%). The proportion of those who replayed their entire winnings during the day was doubled between the intermediate and extreme levels of problem gamblers (32.6% *vs.* 17.0% *vs.* 1.9% for “extreme moderate” gamblers).

The increase in risk-taking was reflected in all the elements proposed, whether it was the frequency of play, the amount of wager, the duration of sessions or the desire to play. The proportions doubled be-

tween the “moderate extreme” and “extreme problem” gambling groups. The differences were 1.5 to 2 times higher as the level of intensity of play increased.

The differences in the reactions of the three groups of players to the significant wins were particularly strong. The proportion of players reporting feelings

deterioration in the management of daily life (9.7%; 25.2%; 33.4%).

5.2 Link between winning and problem gambling

First, the analysis focussed on all gamblers and looked for factors associated with problem gambling

Table 7: Multivariate analysis of factors associated with problem gambling among all gamblers

	ADJUSTED OR	P. Value
Socio-demographics and gambling behaviour		
Man (ref. Woman)	1.90	0.000
18 to 34 years old (ref. 35 years old and +)	4.18	0.000
Degree >BAC [A-level or equiv.] (ref. <=BAC [A-level or equiv.]	1.12	0.009
Size of Conurbation pop. 2000 and + (ref. Less than pop. 2000)	0.83	0.997
Paris conurbation (ref. Less than pop. 2000)	0.92	0.011
Monthly income + €3,000 euros (ref. €3,000 or less)	0.69	0.003
Not in debt but already there (ref. not in debt)	1.78	0.000
In debt (ref. not in debt)	2.44	0.000
Age at first time of gambling -19 years old (ref. 20 years old and +)	0.76	0.017
Win in the entourage – Yes (ref. No)	4.25	0.000
Significant win – Yes (ref. No)	3.71	0.000
Expense: €5-€20 (ref. less than €5)	1.80	0.006
Expense: €20 and + (ref. less than €5)	2.00	0.001
Frequency: every day or several times a week (ref. Regularly)	3.23	0.000
Game most invested in: scratchcard or slot machine (ref. draw)	1.20	0.105

Source: ENIGM - SEDAP survey - 2020

of physical discomfort (shaking, shortness of breath, need to sit down) increased from 21.5% to 38.2% and 52.3%). The share of those showing anxious reactions (“worry, some fear”), from 16.2% to 30.2% and 52.3%. For the feeling of “calm and inner peace”, the levels increased from 32.8% to 39.8% and 59.5%).

Feelings of control or of having been helped in achieving this significant win also increased (38.9%; 47.1%; 58.5% and 36.8%; 40.7%; 53.9% respectively).

In terms of the impact on gamblers' lives, improvement in professional activity was reported by 12.8%, 21.1% and 34.8% respectively, psychoactive substance use by 11.7%, 23.2% and 35.5%, and an increasing deterioration in the management of daily life by 9.7%, 25.2% and 33.4%.

In terms of impacts on players' lives, two types of gamblers moved up in the three groups on the following criteria: improvement in professional activity (12.8%; 21.1%; 34.8%) and the use of psychoactive substances (11.7%; 23.2%; 35.5%) and an increasing

behaviour among different sets of variables: socio-demographic

characteristics of gamblers, context, experience and gambling behaviour. The analysis of the potential link between winning and problem gambling was complex because of the multifactorial dimension of the associated factors. Analyses that took this plurality of factors into account were conducted.

When the socio-demographic characteristics and gambling behaviours of all gamblers were considered, some of these factors were predictive of problem gambling (Table 7, below). Younger men in debt had a significantly increased risk of being problem gamblers, all other factors being equal. On the behavioural side, not surprisingly, high spending or frequency of gambling were significant predictors. But the strongest links with problem gambling were reporting at least one significant win or having experienced a significant win in their entourage. Gamblers who had any of these experiences were four

times more likely to be problem gamblers than those who had not.

5.3 Predictors of problem gambling among “winners”

An analysis focusing on the group of gamblers who reported having experienced at least one major win made it possible to examine the specific factors that may predict the occurrence of problem behaviour (Table 8a and 8b, page 24) in this population. Thus, problem gamblers defined their winnings much more as: “a win that I replayed in full and lost”, “a win that replaced all or part of my losses”, or “a win that followed a large loss”, than others.

Certain contexts were more frequently mentioned by problem gamblers, in particular difficulties in a relationship or, conversely, favourable developments with their relationship status, an unstable financial situation (difficulties or improvement), housing problems and the presence of problem gamblers in their entourage.

In the qualitative study verbatim, a significant win was described as “a win that occurs in a context, a difficult situation where the player is in one or more vulnerable situations (separation/divorce/marital difficulties, loss of job/professional difficulties, financial situation with credits and sometimes over-indebtedness).” The arrival of the win made it possible to (at least temporarily) conceal or resolve these situations: this win seemed to “*save the player*”, to give them “*a second wind in relation to their vulnerabilities*”.

On the question of the use of the winnings, the fact of replaying the winnings was a particularly strong predictive factor, especially if the winnings were replayed on the same day. Paying off debts and investing in property were also, to a lesser extent, ways of using the winnings from problem gambling.

Changes in beliefs after the occurrence of gambling were, on the whole, fairly weakly predictive of problem gambling. However, there was evidence that a belief in better control of chance was linked to problem gambling. The type of reaction after the win was more explanatory. Feeling physical discomfort when a big win occurred was a risk factor for problem gambling, while feeling that the win was a “good experience” was a protective factor.

The qualitative study reported that among so-called “extreme problem gamblers”, more than half believed they would win often and/or more, and a small proportion imagined that they could have won more using another machine or online casino site. Following big wins, mistaken beliefs about the sequence of wins, or for example the hot hand, were more prevalent in problem gamblers.

All the descriptive facets of impulsivity were more pronounced among problem gamblers. The three most strongly associated were “negative urgency”, “lack of perseverance” and “seeking a sensation”.

When analysing all the socio-demographic characteristics and the behaviour of gamblers who reported at least one big win, some of these factors were found to be predictive of excessive gambling. The main socio-demographic predictor was the youth of the player. With regard to gambling behaviour, frequency of gambling was significantly predictive. Two other variables added to this analysis were instructive. Contrary to what might have been envisaged, the amount won was not predictive of excessive gambling. In fact, the opposite was true, namely a stronger link with small wins. Finally, the presence of a significant win in their entourage was the strongest predictor of problem gambling, as it was for all gamblers. These findings were consistent with those of a longitudinal study that looked at the predictors of problem gambling and found a significant relationship between the severity of gambling disorders and various measures of impulsivity, depression, anxiety, false beliefs and reports of early winnings (Turner, Jain, Spence, & Zangeneh, 2008).

Table 8a: Multivariate analyses of factors associated with problem gambling among gamblers who reported a significant win

	ADJUSTED OR	P. Value
Socio-demographics and gambling behaviour		
Man(ref. Woman)	2.06	
18 to 34 years old (ref. 35 years old and +)	4.87	
Level of education >BAC [A-level or equiv.] (ref. <=BAC [A-level or equiv.])	1.66	
Monthly income + €3,000 euros (ref. €3,000 or less)	0.77	
Not in debt but already there (ref. not in debt)	1.66	
In debt (ref. not in debt)	1.94	
Expense: €5-€20 (ref. less than €5)	2.24	
Expense: €20 and + (ref. less than €5)	2.37	
Frequency: every day or several times a week (ref. Regularly)	6.10	
Game the most invested in: scratchard and slot machine (ref. draw)	1.15	
Win in the entourage – Yes (ref. No)	4.25	
Amount of winnings (100 to 999) (ref. less than 100)	0.56	
Amount of winnings (1,000 or +)	0.57	
Time spent on game at time of significant win of 1 year or – [ref. 1 year or +]	1.21	
Definition of significant win		
By its value (amount)/it was a big amount	0.60	
It is a higher win than my usual standard of living	1.64	
It is a win that I have repaid and lost in full	3.49	
It is a win that I cashed out	0.38	
This win has replaced all of my losses/has covered a part of my losses	3.12	
This win has followed a series of losses/a big loss	3.53	
Because my starting stake was low	0.50	
Win obtained on a slotmachine	1.52	
The win is not enough to match my losses	2.49	
It was another player's win (family/friends/contact)	1.91	
It came during difficult circumstances	2.00	
It came at a good time	1.20	
Life context		
Relationship difficulties	10.69	
Satisfactory romantic situation	3.19	
Financial difficulties	3.25	
Improvement in your finances	3.34	
Difficulties related to work/studies	1.80	
Satisfactory professional conditions	0.51	
New family responsibilities / new expenses	1.54	
Health problems	0.72	
Gamblers/Excessive gamblers in your entourage	4.33	
A period of mourning	1.49	
Housing problems	3.37	
Change/stoppage: tobacco/alcohol/drugs	1.90	
Consumption of alcohol, tobacco or other drugs	1.94	
A feeling of solitude/worry	2.75	
A close entourage	0.35	
A period of stress/anxiety	0.54	

Table 8b: Multivariate analyses of factors associated with problem gambling among gamblers who reported a significant win

	ADJUSTED OR	P. Value
Use of significant win		
Replays a part of the win (ref. Does not replay the win)	5.09	0.000
... the whole win but not on the same day	28.4	0.000
... the whole win on the same day	42.5	0.009
I could afford objects that brought me joy	0.91	0.647
I could afford good times alone or with friends or family	0.69	0.124
I invested in property	3.92	0.000
I have spent the sum on daily expenses	1.07	0.758
I have shared it with family/friends	0.75	0.373
I have paid off debts	1.21	0.000
I saved it	0.78	0.326
Reaction after significant win		
A feeling of joy, happiness	0.39	0.002
A feeling of agitation / euphoria / excitement	0.79	0.024
A feeling of strength, power / self-confidence	3.49	0.000
Of stupefaction, not believing it / surprise	0.38	0.000
A feeling of worry, a certain fear	3.12	0.000
A feeling of physical illness	3.53	0.000
A feeling of calm / inner peace	0.50	0.000
The impression of being in control / the ability to find the right numbers	1.52	0.047
A feeling of relaxation / of hope reborn	2.49	0.000
A feeling of "justice" / of finally being lucky	1.91	0.009
The feeling of having been helped (by a loved one, God, fate, luck, etc.)	2.00	0.002
A good time	1.20	0.279
Evolution of beliefs after significant win		
That you can still have a significant win	0.99	0.918
That you could elude chance from now on	1.46	0.000
That the fact of continuing to gamble shall bring results	1.39	0.002
That your own skills are efficient	1.22	0.078
That your luck was finally there, you had to believe in it	0.72	0.003
That this win was the result of a new strategy	1.48	0.000
That luck is linked to the feeling that influences your way of playing	1.28	0.022
That you have recovered the money of the operator/the State	1.11	0.303
That this win gives you the option of playing again	0.90	0.312
That your usual strategies have made you win	1.03	0.815
That this win was only the result of chance	0.88	0.188
Impulsivity		
Negative urgency	1.34	0.006
Positive urgency	1.14	0.000
Lack of premeditation	1.18	0.000
Lack of perseverance	1.30	0.000
Seeking a sensation	1.29	0.000

Source: ENIGM - SEDAP survey - 2020

Box 3: Winning by proxy (*Armelle Achour*)

In gambling, winnings can be acquired, or thought to be acquired, in various ways. Whether it is real, symbolic or imaginary, this causes many distortions in reasoning.

The first situation is a win in an online gambling game, **where the person whose identity was used did not play**. For example:

- A minor who created an online gambling account with their parents' credit card and ID,
- A banned gambler who obtained other people's documents to register online.

In both cases, there was indeed gambling and winning, but it was **gambling and winning by proxy**.

The second scenario is a win by a peer, a peer with whom one identifies or can identify. This was also a win by proxy, this time **in a figurative sense**. Many people have started gambling or increased their gambling after witnessing someone else's win. The entry into excessive gambling frequently follows the observation of a third party's win.

This was the case for Paul, 32, a moderate gambler at the beginning. However, a year and a half ago he witnessed two of his friends winning a large sum of money. From that time, he increased his gambling and won €25,000 three months ago. He then “went off the rails” and within 3 months lost all his winnings to the extent that he now owes his employer €8,000 after improperly using his business card.

This motivation of peer identification is used in some of the gambling advertisements, where the peers identified by the advertisement look like “*me*”. The winner's appreciation is received by the peer group and everyone says to themselves: “*That could be me*”.

The third case is association with others' winnings. A child who saw or heard that their father won, would readily say “we won”. They would take partial credit for the victory. Later, as they matured, they would say “my father won”. But at an age when their brain was not yet mature, this win would be a real marker in their future as a gambler.

Many gamblers link their excessive gambling to a parent's winnings. Jacques, 27, places wagers on sport. He remembers seeing his father win when he was 14 years old. Today, he works two jobs up to 90 hours a week and saves money for several weeks. Then he gambles while betting large sums.

Finally, there is another win by proxy, again **figuratively based on a significant difference between the actual win and the win a gambler attributes to themselves**, with a feeling that there was a **dispossession** by a third party **of the win** that was “due to me”. Three examples:

- A player leaves a slot machine to collect chips from the cashier and another player takes their place and wins with a single chip;
- A player buys scratch cards and has no winnings but the next customer wins;
- A roulette player bets on 17 all night and the number doesn't come up. They decide to change the number but another player bets on 17... which comes up, so the other player wins on that number.

The misunderstanding of the principle that “each play is independent from others” is of particular importance here. Chance is erased, it is absent from the reasoning. The reasoning is: they won but “**it should have been me**”.

6. Additional findings from the qualitative survey

6.1 The first win as a trigger for further play

Gamblers who participated in the qualitative study related the amount of their first win, whether significant or not, to their current level of risk taking. For gamblers playing games of pure chance who experienced at least one big win, the higher the amount of the first win, the higher the CPGI score, indicating that the first win has an impact on their gambling. This first win generated intense emotions and was also the trigger for mistaken beliefs among the winners and was often reported as the trigger for continued gambling and even problem behaviour.

The first win obtained at the first bet or in the early stages of practice created a feeling of surprise, astonishment (from the awareness of the existence of games to the illusion of the ease of winning). It aroused intense emotions in the players: they all related their joy, but some went as far as to evoke euphoria, strong excitement linked to feelings of unease/trembling, the disturbing aspect of this first win or the feeling of freedom it gave them (*“I felt happy and free”*; *“I was going to do everything I wanted”*).

The first win generated pride, a sense of personal importance (*“an important social joy”*), a form of gratification. It awakened the idea that luck had arrived, indeed, that a capacity for gambling had been revealed and needed to be put into practice.

When analysing the results by type of gambler, while some moderate-risk gamblers reported no negative impact of this first win on their gambling, others identified an increase in their gambling frequency or betting levels. Others claimed to have remained reasonable or slowed down their pace of play and report positive consequences for their lives.

The majority of problem gamblers expressed the view that, following this first win, they would now win more and more. They went on to talk about the belief in luck: *“I’m lucky!”*; *“I thought Lady Luck, the seer, had given me the gift. To have won, to feel the game and the winnings coming”* and the belief shared by high-risk gamblers of a door to a wonderful world: *“Gambling is a magical and wonderful world, the gateway to dreams and paradise.”*

For half of the players, this first win was also seen as a failure, a *“piece of bad luck waiting to happen”*, an event that *“destroyed”* or *“spoiled my life”*, because of impact on their gambling practices: *“You always say to yourself, the 2nd time, the 3rd, the 4th, that you are in control, but in fact you are looking to relive what you experienced the first time. I see it as a trap that has closed on me.”*

The majority of players report a sharp increase in their frequency and intensity of gambling, as well as their betting, following this first win.

6.2 Lessons learned in terms of prevention and harm reduction perspectives

In the qualitative study, certain family events such as meeting supportive or helpful spouses or refocusing on family and friends proved to be protective for gamblers. When they described how they slowed down their gambling, a lack of money at a particular time, a drop in income or a series of repeated or successive losses were found to be protective factors.

For some, an awareness of their addictive behaviour, the fact of seeing other gamblers with problem gambling behaviours (mirror effect), the memories of past mistakes and the impact on their entourage (thinking of close caregivers, children, spouse) gave them the will to change their behaviour. The softening with age and a series of losses could also be protective factors that triggered a process of change in the gambler. Others cited the experience of military service (when it still existed) or a change in their job, quitting smoking and finally the importance of responsible gambling: access to *Playscan*, or the national ban on gambling in casinos (the possibility of being excluded from casinos).

The win in itself could also have caused some players to stop playing if it allowed them to recover their stake or part of their stake.

Of the casino players in the sample, a majority have been officially banned from playing in casinos in the country. Some considered that these bans were beneficial in slowing down their gambling and others say that they were waiting or looking forward to the lifting of the ban. The day the ban was lifted was then experienced as an anniversary date.

The majority of the so-called “extreme problem gamblers” sought help from institutional resources (SOS

Joueurs, local or hospital CSAPA and from a croupier). Some of them are still monitored by CSAPAs.

Conclusions and perspectives in terms of prevention and harm reduction

Emmanuel Benoit, Baptiste Lignier, Lucia Romo

Overall, the study provided relevant lessons that could be taken into account in prevention and harm reduction strategies. A significant win was defined as an amount, but also a time, a context, a use or a gambling practice. In addition to the elements already identified as risk factors (youth, high frequency of gambling), several markers of problem gambling have been identified through the ENIGM study. The presence of one or more significant win, the existence of a significant win in their entourage before a person starts gambling, erroneous beliefs (better control of chance, etc.), the fact of replaying all of one's winnings in the course of the day, stress factors and social vulnerabilities (marital problems, difficult financial situation, housing problems, etc.), physical reactions following the winnings (fear, discomfort, etc.), and characteristics of impulsivity were thus mentioned.

These findings dispelled the myth of the “big win” and its link to gambling problems. While it was expected that wins deemed “significant” would correspond to large amounts, the findings were in line with other work that has shown that: “It is not the early “big win” per se that seems to be most problematic, but medium-sized wins, wins by other family members, wins that follow a loss” (Turner et al., 1986). Repeated wins also seem to be an essential component of problem gambling.

This study, based on multifactorial variables, offers a solid overview of the complexity of problem gambling, to explain, but also to prevent, accompany and reduce problems with gambling.

The results of the study demonstrated the relevance of the methodological approach chosen, based on the concept of a significant win, which is based on the perception of the player without imposing any pre-defined criteria. This definition has made it possible to better take into account all of the subjective per-

ceptions of winning situations that may have an impact on a gambler's career and on the possible difficulties they may encounter.

Limitations of the study

Three points should be highlighted: firstly, the sample is representative of the French population aged 18-64 in terms of gender and age distribution and may be biased, as it is not random. Online surveys generally use a non-probability example.

In addition, information about the player's winnings, situation and reactions was necessarily retrospective, which meant that there were memory biases (biases related to the player's current situation, reconstruction of their past to retrace a coherent life story).

Finally, while this study has attempted to delineate the factors associated with problem gambling and their relative importance (winnings by themselves appear to be one of the most important factors), it should be borne in mind that it is usually a combination of vulnerability factors, particular contexts and the encounter with a specific gambling offer that can lead a person to become a problem gambler.

1. Perspectives in terms of prevention

Erroneous beliefs associated with problem gambling, such as belief in luck, belief in one's own strategies, or belief that persistence will pay off, could be targeted in prevention strategies, but also in the management of gamblers

- Preventive education on the use of a winnings marker could reduce the risk of wins by people in vulnerable situations. Providing players with information on how to manage their winnings, just after a significant win, the meaning of their wins, or addressing cognitive distortions could be a minimum to achieve.
- Deferring the payment of winnings from a certain level onwards to give the player time to “calm down” and “cool down” to take a break following a significant win.
- Consideration could be given to the possibility of splitting the large win into several short-term payments.

- Awareness should also be raised about the protection of minors in the presence of gamblers in the entourage and the possible impacts of the wins on this entourage. Indeed, younger children may tend to model a form of “learning”. The BIEN JOUER prevention tool could be amended with these elements and be used for risk prevention and reduction.
- The review and control of advertising campaigns should proscribe anything that might reinforce the narcissistic overstatement of winning, reduce its overvaluing effects, temper some of the erroneous beliefs predictive of problem gambling as well as the emotional intensity: superpower, illusion of control, superstition, belief that one can beat the odds and the operator.
- There is a need for extensive educational work on these same erroneous beliefs about the notion of chance, probabilities, etc. This could be done by creating variations of the BIEN JOUER tool (for audiences such as adults or parents)
- Online gambling data consolidated for a player with a post-win evaluation of feelings should contribute to targeted prevention messages.
- The attention of prevention actors should be focused on the debts of the players and their need to recover to pay off their debts.
- The profiles of online gamblers could be analysed and categorised in order to carry out targeted harm reduction actions aimed at **avoiding over-solicitation of advertising** that could trigger “*craving*” phenomena (irrepressible need to play).
- The analysis of data and information determining a predictive risk should lead to an attempt to reduce the outcome by balancing the player's behaviour with rational, formative elements, as needed for targeted support.
- The “chasing” phase (recovering at any cost the money previously lost on gambling) in a gambler's trajectory needs to be better identified and addressed by risk reduction strategies.
- It is also important to include work on wins in terms of cognitive restructuring, work on managing emotions, in therapy.

2. Perspectives in terms of harm reduction

- The results of the study's predictive model could be used as an observational, early identification and predictive benchmark by gambling operators to target risk reduction actions.
- Training for gambling retailers on harm reduction could be deployed according to these criteria. For example, taking into account the reactions of players to a significant win in a retail outlet and doing risk reduction on location-related misconceptions.
- Players' mistaken beliefs following a significant win will need to be analysed in their association with gambling problems in order to adapt and break down those thoughts that luck can be beaten or the illusion that the winning player has exercised control over the outcome.

Perspectives for future research

Jean-Michel Costes

Further research into the notion of a significant win in the entourage seems to be a relevant line of research to be pursued, by specifying the nature of the entourage: relatives, other players met in gambling venues or highlighted in advertising.

The analysis of the significant win should also be differentiated according to the nature of the game played. The aggregation in the category of games of pure chance of practices as different as draw games, scratch cards and slot machines weakens the analysis. It is more than likely that the perception and impact of significant wins is very different for each category of gambling activity.

Replicating a similar study in another cultural and political context would highlight convergences and divergences in relation to the findings of this study. The conduct of a study in Poland, the results of which are expected soon, should contribute to this, by putting the lessons learned from these two national studies into perspective.

Finally, it would be necessary to test the predictive model in conjunction with prevention or harm reduction messages in order to observe the gambling behaviour and trajectory of the gambler.

Bibliography

- Blaszczynski, A., Ladouceur, R., Goulet, A., & Savard, C. (2006). How Much Do You Spend Gambling? Ambiguities in Questionnaire Items Assessing Expenditure. *International Gambling Studies*, 6(2), 123-128. <https://doi.org/10.1080/14459790600927738>
- Blaszczynski, A., Ladouceur, R., Goulet, A., & Savard, C. (2008). Differences in monthly versus daily evaluations of money spent on gambling and calculation strategies. *Journal of Gambling Issues*, 98-105.
- Braverman, J., Tom, M. A., & Shaffer, H. J. (2014). Accuracy of self-reported versus actual online gambling wins and losses. *Psychological Assessment*, 26(3), 865-877. <https://doi.org/10.1037/a0036428>
- Brickman, P., Coates, D., & Janoff-Bulman, R. (n.d.). *Lottery Winners and Accident Victims: Is Happiness Relative?* 11.
- Costes J.-M., Tovar M.-L., Lignier B. Note de synthèse revue de la littérature sur les gains, Zoom' Recherches n°3, SEDAP 2020
- Costes J.-M., Pousset, M., Eroukmanoff V., Le Nezet O., Beck F., Arwidson P., "Les niveaux et pratiques des jeux de hasard et d'argent en 2010", *Tendances* n°77, OFDT
- Costes J.-M., Eroukmanoff V., Richard J.-B., Tovar M.-L., "Les jeux d'argent et de hasard en France en 2014", ODJ, *Notes* n°6
- Costes J.-M., Richard J.-B. (SpF), Eroukmanoff V., Le Nezet, O., Philippon A. "Les Français et les jeux d'argent et de hasard – Résultats du Baromètre de Santé publique France, 2019", *Tendances* n° 138, OFDT.
- Costes J.-M., Eroukmanoff V., "Évolution des dépenses aux jeux d'argent et de hasard sur la période 2000 – 2016" ODJ, *Notes* n°8.
- Cummins, L. F., Nadorff, M. R., & Kelly, A. E. (2009). Winning and positive affect can lead to reckless gambling. *Psychology of Addictive Behaviors*, 23(2), 287-294. <https://doi.org/10.1037/a0014783>
- Dong, G., Lin, X., Zhou, H., & Du, X. (2014). Decision-making after continuous wins or losses in a randomized guessing task: Implications for how the prior selection results affect subsequent decision-making. *Behavioral and Brain Functions*, 10(1), 11. <https://doi.org/10.1186/1744-9081-10-11>
- Dowling, N. A., Merkouris, S. S., Greenwood, C. J., Oldenhof, E., Toumbourou, J. W., & Youssef, G. J. (2017). Early risk and protective factors for problem gambling: A systematic review and meta-analysis of longitudinal studies. *Clinical Psychology Review*, 51, 109-124. <https://doi.org/10.1016/j.cpr.2016.10.008>
- Kassam, K. S., Morewedge, C. K., Gilbert, D. T., & Wilson, T. D. (2011). Winners Love Winning and Losers Love Money. *Psychological Science*, 22(5), 602-606. <https://doi.org/10.1177/0956797611405681>
- Kostek, J., & Ashrafioun, L. (2014). Tired Winners: The Effects of Cognitive Resources and Prior Winning on Risky Decision Making. *Journal of Gambling Studies*, 30(2), 423-434. <https://doi.org/10.1007/s10899-013-9365-x>
- Lim, M. S. M., Bowden-Jones, H., & Rogers, R. D. (2014). Expressing Gambling-Related Cognitive Biases in Motor Behaviour: Rolling Dice to Win Prizes. *Journal of Gambling Studies*, 30(3), 625-637. <https://doi.org/10.1007/s10899-013-9381-x>
- Orford, J., Wardle, H., & Griffiths, M. (2013). What proportion of gambling is problem gambling? Estimates from the 2010 British Gambling Prevalence Survey. *International Gambling Studies*, 13(1), 4-18. <https://doi.org/10.1080/14459795.2012.689001>
- Stange, M., Grau, M., Osazuwa, S., Graydon, C., & Dixon, M. J. (2017). Reinforcing Small Wins and Frustrating Near-Misses: Further Investigation Into Scratch Card Gambling. *Journal of Gambling Studies*, 33(1), 47-63. <https://doi.org/10.1007/s10899-016-9611-0>
- Turner, N. E., Jain, U., Spence, W., & Zangeneh, M. (2008). Pathways to Pathological Gambling: Component Analysis of Variables Related to Pathological Gambling. *International Gambling Studies*, 8(3), 281-298. <https://doi.org/10.1080/14459790802405905>
- Tovar M.-L., Costes J.-M., Benoit E. Les impacts des gains marquants chez les joueurs d'argent et de pur hasard, Zoom'Recherches n°1, SEDAP 2021
- Tuner, N.E., Littman-Sharp, N., (1986), Masood, S., Spence, W., Final report winners: Why do some develop gambling problems while others do not? Social, prevention and health policy research department, the Centre for Addiction and Mental Health.
- Van der Linden, M., d'Acremont, M., Zermatten, A., Jermann, F., Larøi, F., Willems, S., Juillerat, A.C., & Bechara, A. (2006). A French Adaptation of the UPPS Impulsive Behavior Scale: confirmatory Factor Analysis in a Sample of Undergraduate Students. *European Journal of Psychological Assessment*, 22, 38
- Williams, R. J., Hann, R., Hann, R., Schopflocher, D., West, B., McLaughlin, P., Flexhaug, T. (2015). *Quinte longitudinal study of gambling and problem gambling* (p. 302) [Report prepared for the Ontario problem gambling research Centre]. Guelph, Ontario.
- Xu, J., & Harvey, N. (2014). Carry on winning: The gamblers' fallacy creates hot hand effects in online gambling. *Cognition*, 131(2), 173-180. <https://doi.org/10.1016/j.cognition.2014.01.002>

Appendix

Table 1: Univariate analysis (crude Odds ratio) between the significant win and socio-demographic variables

Variable	N	Odds ratio	p
SEX	WOMAN	Reference	
	MAN	1.31 (1.16, 1.47)	<0.001
TAILLE_AGGLO_rec	Rural municipalities	Reference	
	2000 inhabitants and +	0.85 (0.74, 0.98)	0.03
	Paris conurbation	1.01 (0.84, 1.22)	0.88
AGE5_rec	35 years old and +	Reference	
	18 to 34 years old	1.62 (1.43, 1.84)	<0.001
ETUDE4_rec	BAC and -	Reference	
	> BAC	1.02 (0.91, 1.15)	0.70
REV_MENS3_rec	Less than €1500 – €3000	Reference	
	More than €3000	1.01 (0.89, 1.15)	0.86
ENDET3	No, never	Reference	
	No, already have been	1.73 (1.53, 1.96)	<0.001
	Yes	1.68 (1.41, 2.00)	<0.001

Table 2: Univariate analysis (crude Odds ratio) between the significant win and gambling practice variables

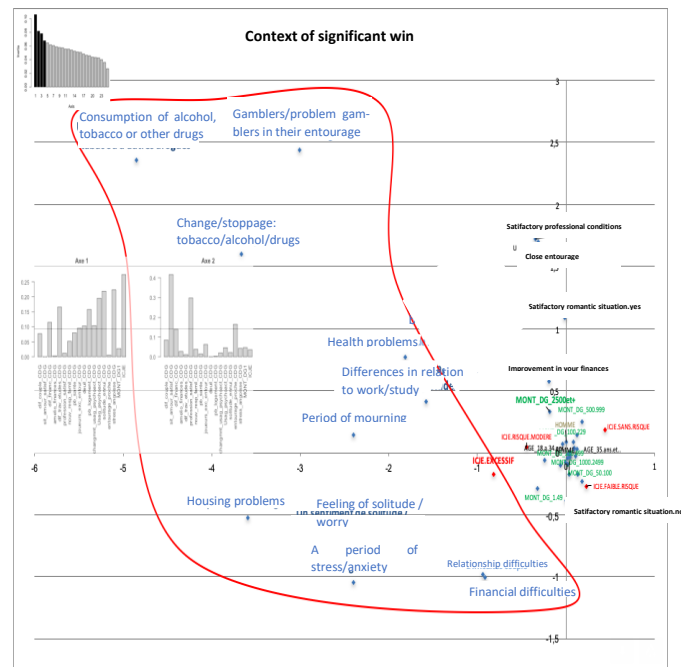
Variable	N	Odds ratio	p
AGE_PJ2_rec	Over 19 years old	Reference	
	19 years old and +	1.63 (1.43, 1.86)	<0.001
ICJE	NO RISK	Reference	
	LOW-RISK	1.48 (1.26, 1.74)	<0.001
	MODERATE RISK	2.03 (1.65, 2.49)	<0.001
	PROBLEM	5.13 (4.08, 6.47)	<0.001
DEPENSE2_rec	€0 –€5	Reference	
	€5-€20	1.15 (0.96, 1.38)	0.1
	€20 and +	1.65 (1.37, 2.00)	<0.001
FREQUENCE_rec	Sev. times per month and per year	Reference	
	Every day or sev. times per week	1.48 (1.28, 1.73)	<0.001
JINV_rec	Draw and OTHER	Reference	
	SCRATCHARD and MAS	1.35 (1.19, 1.54)	<0.001
G_ENTOUR	No	Reference	
	Yes	2.27 (1.97, 2.61)	<0.001

Table 3: Univariate analysis (crude Odds ratio) between a significant win and the motivation to gamble

Variable	N	Odds ratio	p
MOTIV_R1	5692	1.06 (1.01, 1.12)	0.03
MOTIV_R2	5692	1.17 (1.12, 1.22)	<0.001
MOTIV_R3	5692	1.12 (1.09, 1.15)	<0.001
MOTIV_R4	5692	1.00 (0.98, 1.03)	0.72

Reading note: Motiv_R1 to Motiv_R4 are the 4 motivations to gamble (social, “coping with/escape negative emotions, reinforce positive emotions” and financial)

Chart 2: Context of a significant win according to the Canadian Problem Gambling Index (CPGI)



Sedap
 6, avenue Jean Bertin, 21000 Dijon
 +33 (0)3 80 68 27 27
 www.pieje-addictions-sedap.fr

ACKNOWLEDGEMENTS

To the structures that participated in the recruitment of problem gamblers for the qualitative aspect: SOS JOUEURS, Hôpital Marmottan, CSAPA Santoline (21), CSAPA Imagine (95) and CSAPA Arc-en-Ciel (34).

To the Médiamétrie team and to all the people who answered the quantitative questionnaire and the gamblers in the qualitative study.

To Valérie Leberre (Aloa Consulting), for her advice on the quantitative questionnaire.